

State of Arizona

**Department  
Of  
Water Resources**

[www.water.az.gov](http://www.water.az.gov)

# **TRANSITION REPORT**

November 1, 2002

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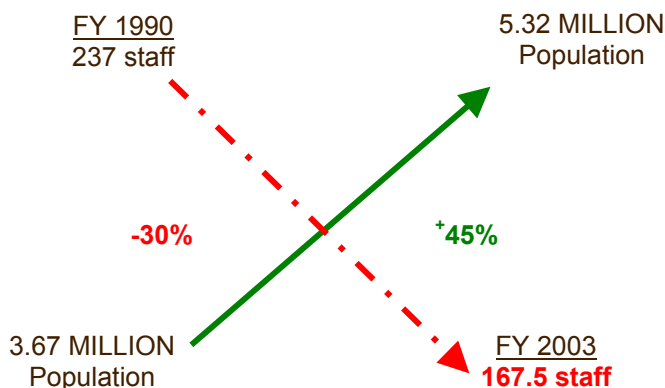
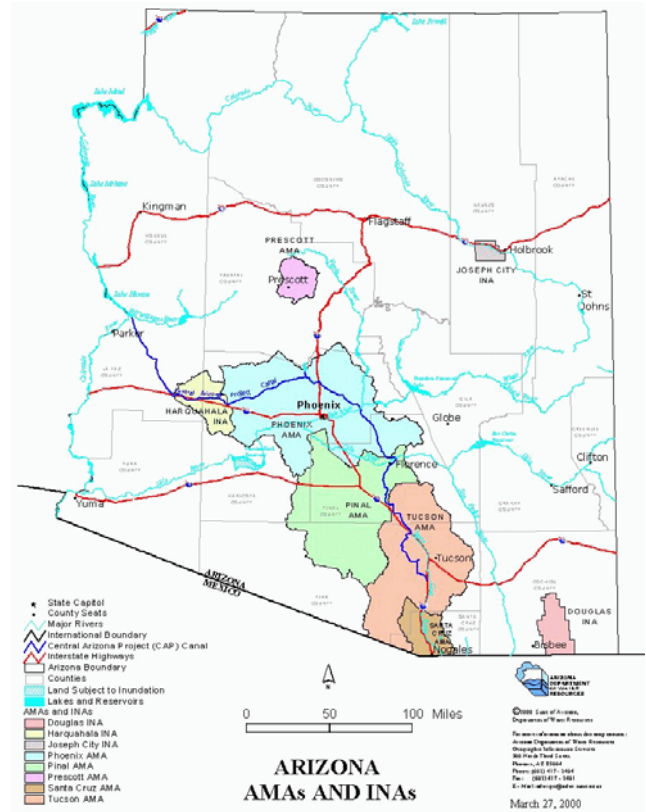
# ADWR TRANSITION REPORT

## EXECUTIVE SUMMARY

The Arizona Department of Water Resources (ADWR) manages the state's most precious resource. Our mission extends from licensing well drillers, assuring the safety of dams, and developing mandatory conservation requirements for all water use sectors to protecting the state's Colorado River allocation and facilitating Indian water rights negotiations among tribal representatives, local interests, federal and state officials and members of Congress. This wide range of responsibilities, in combination with the evolving and complex nature of the legal and political arena in which water management is conducted, has created a challenging environment for ADWR. For the last twenty-two years, the agency has been quick to respond to changing conditions, to identify key strategic moves to protect the state's interests and to respond to legislative directives. Arizona's water supply is more secure today than it was 22 years ago as a result of the efforts of a seasoned and effective staff within ADWR and the partnerships forged with Arizona's water users and water providers.

The landmark 1980 Groundwater Management Code (Code) created ADWR. The Legislature enacted the Code to relieve the problem of groundwater overdraft in parts of Arizona that were designated Active Management Areas (AMAs)—(See Appendix 1 describing Code provisions). ADWR's groundwater management structure within the AMAs has received national and international acclaim. In more recent times, additional praise has been focused on ADWR's leadership in underground storage and recovery (recharge) programs, the establishment of the Arizona Water Bank, and the Assured Water Supply Program that requires proof of a 100-year water supply before a subdivision plat can be approved.

Despite its important role and the many successes described in this report, ADWR faces a significant funding crisis threatening core functions and the structure of the water management program. There are fewer people on ADWR's staff than at any time since ADWR was created. Lawmakers authorized a general fund staffing level of 207, yet there are now only 167.5 general fund employees in ADWR. During the last decade, the state's population has risen by 45% and statutory mandates have continued to increase, while the agency's staffing level has declined by 30%.



The primary mission of ADWR is to ensure an adequate quantity of water of adequate quality for Arizona's future. Challenges to providing a sustainable water supply are numerous. By 2025, when the Code requires key management goals to be met, the projected population of the state will exceed six million within the AMAs and 1.8 million in the rest of the state. This represents a 280% population increase in the AMAs alone since 1980. Competition for water throughout the southwest continues to increase as neighboring states experience similar rates of growth; Arizona must

continue to be vigilant to protect its water rights, particularly its rights to Colorado River water. It is essential that our state continue to play a prominent role in Colorado River negotiations.

Arizona's water also supports a number of Indian tribes whose legal rights to quantities of water currently are in negotiation as part of the adjudication of water rights within the state. The outcome of these settlement negotiations will significantly impact the state's water budget. In addition to water supply needs for human use, environmental protection issues are of substantial concern and may affect Arizona's future water supply availability.

The water needs of Arizona's rural areas, where few renewable supply options exist, are becoming urgent. The persistent drought has caused several small communities where wells have gone dry to import water by truck. Drought will continue as a key concern in this desert state. With the likelihood of increased climatic variability, floodplain management and dam safety activities may become even more critical than they are today. Despite the critical need, ADWR lacks the financial resources to adequately support statewide water management.

Substantial progress has been made within central Arizona in moving toward a sustainable water future, particularly in transitioning the urban demand from a primarily non-renewable groundwater-based supply to increasing dependence on the Colorado River and effluent. ADWR's long-term view of water management needs has served the state well. However, without adequate staff and budget, Arizona's water management programs are severely threatened.



## AGENCY PURPOSE

ADWR manages the water supplies within the state, and represents the state in local, regional, national and international water policy matters.

### Mission/Vision Statement

To ensure a long-term, safe, sufficient and secure water supply for the state; to develop public policies that promote the efficient use and equitable distribution of water in an environmentally sound manner, and to promote the management of floodplains and dams to reduce loss of life and damage to property.

### Calendar of Key Statutory Deadlines (See Appendix 2)

## ORGANIZATION

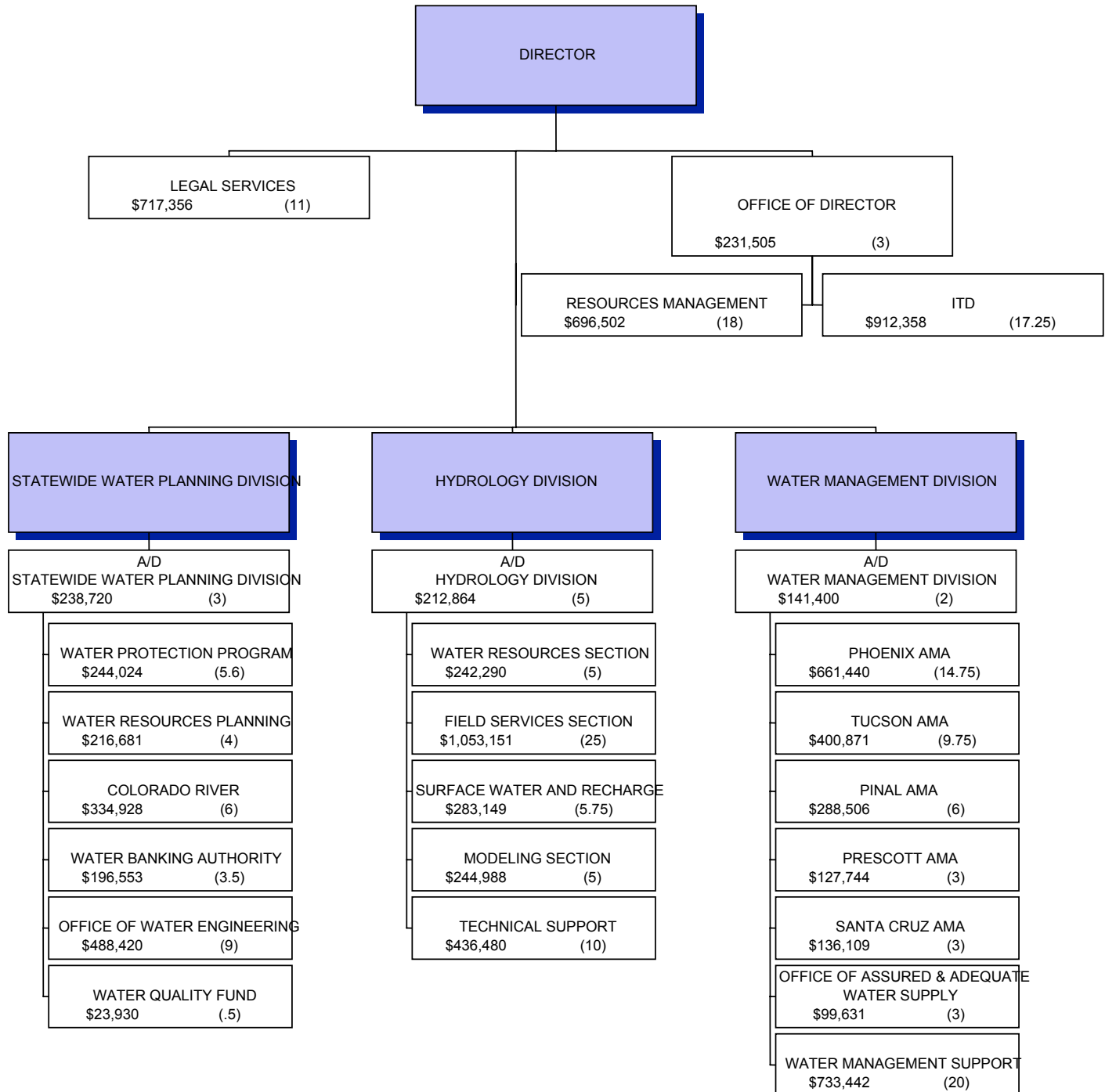
### Agency Organization Charts

Two organizational charts are provided. The first shows the organization with funding from all sources and actual FTEs for each section. The second chart shows actual FTEs and funding from the General Fund only. These are functional organizational charts; similar activities have been grouped to simplify the diagram.

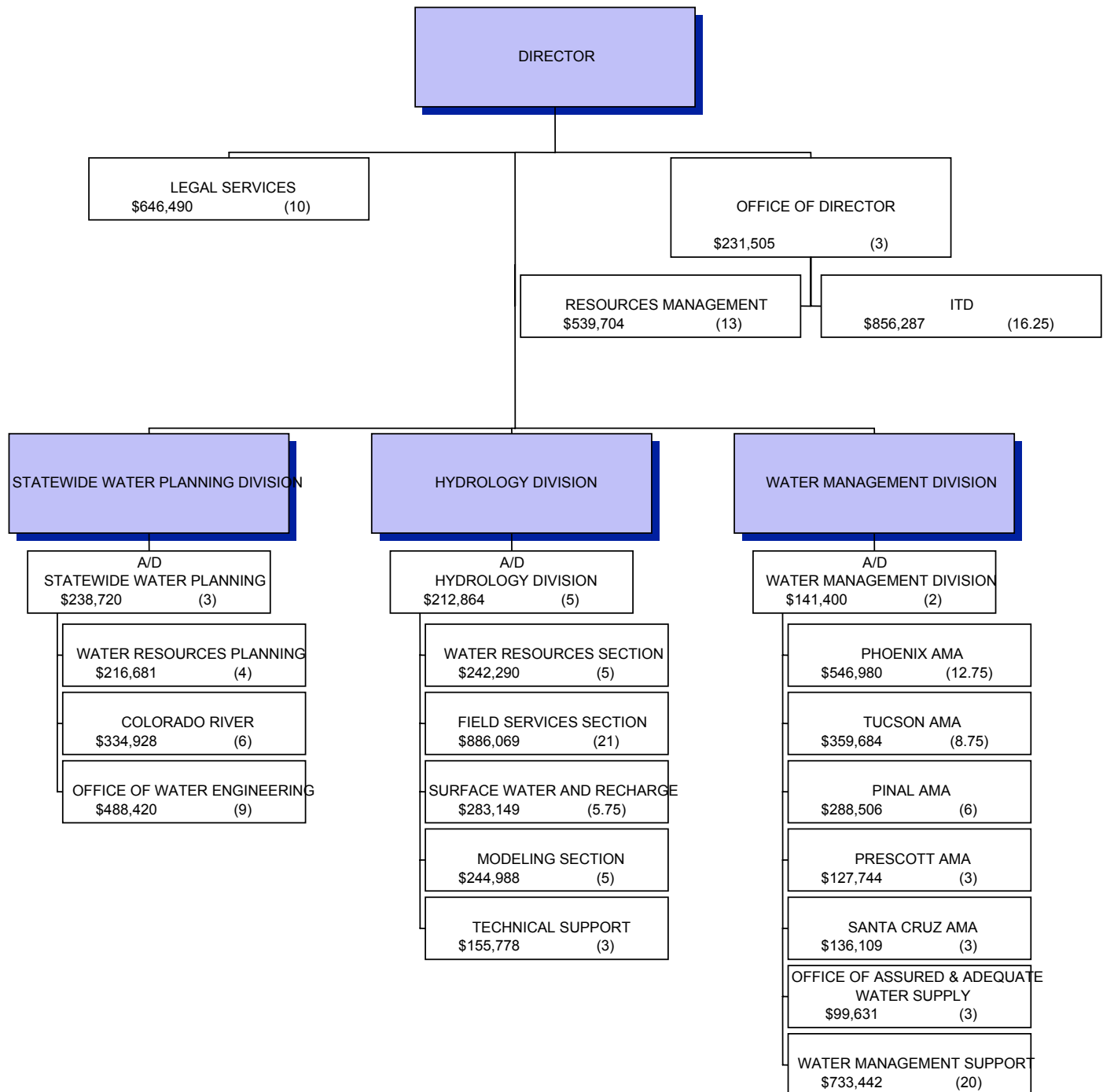
It should be noted that all ADWR managers are working managers who have areas of assigned responsibility in addition to management. Most have multiple areas of expertise and represent the agency in external meetings, research and write documents, negotiate agreements with other parties and coordinate policy development.



Arizona Department of Water Resources  
 Personal Services and FTE by Organizational Unit  
 All Funding Sources  
 October - 2002



Arizona Department Of Water Resources  
 Personal Services and FTE by Organizational Unit  
 General Fund  
 October - 2002



Agency Fiscal '01 & '02 Spending, Fiscal '03 Appropriation, by fund source, by program. Summary report –see below

**Department of Water Resources**  
**Expenditures by Funding Source by Program**

	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY03</b>
	<b>Actual</b>	<b>Actual</b>	<b>Approp</b>	<b>Revised</b>
<b>Total Agency</b>				
General Fund	17,319,500	16,228,100	15,152,400	14,037,200
Other Non Appropriated Funds	4,104,600	7,449,800	12,905,500	12,150,700
Restricted Grants & Water Purchases (1)	18,686,800	25,434,200	31,736,100	31,736,100
Federal Funds	141,400	181,300	592,100	592,100
<b>Total Fund</b>	<b>40,252,300</b>	<b>49,293,400</b>	<b>60,386,100</b>	<b>58,516,100</b>
FTE Positions - General Fund	209.5	196.2	178.6	167.5
FTE Positions - Other Non Appropriated Funds	36.0	44.6	45.4	38.1
FTE Positions Total	245.5	240.8	224.0	205.6
<b>Agency Support</b>				
General Fund	5,321,200	5,286,800	5,094,300	4,953,100
Other Non Appropriated Funds	449,700	972,300	1,875,600	1,875,600
Federal Funds	-	-	-	-
Program Total	5,770,900	6,259,100	6,969,900	6,828,700
<i>FTE Positions</i>	42.8	41.8	42.8	36.0
<b>Water Resources &amp; Statewide Planning</b>				
General Fund	11,234,100	10,346,100	9,268,300	8,394,400
Other Non Appropriated Funds	2,711,500	5,753,000	9,384,700	8,629,900
Grants & Water Purchases (1)	18,686.8	25,434.2	31,736.1	31,736.1
Federal Funds	25,600	-	508,000	508,000
Program Total	32,658,000	41,533,300	50,897,100	49,268,400
<i>FTE Positions</i>	189.7	190.0	171.2	160.6
<b>Office of Water Engineering</b>				
General Fund	764,200	595,200	789,800	689,700
Other Non Appropriated Funds	943,400	724,500	1,645,200	1,645,200
Federal Funds	115,800	181,300	84,100	84,100
Program Total	1,823,400	1,501,000	2,519,100	2,419,000
<i>FTE Positions</i>	13.0	9.0	10.0	9.0

(1) Includes disbursements from Water Protection Fund and Conservation / Augmentation Fund for grants and from the Water Banking Fund and State Water Storage Fund for water purchases and construction of recharge facilities, that cannot be used for the general administration of ADWR.

## KEY TOP LEVEL PERSONNEL

### Director, Arizona Department Of Water Resources

JOSEPH C. SMITH

Responsibilities include overseeing policy and program development and implementation for ADWR. More than twenty-five years experience in state and local government, with emphasis on management and cost control.

#### PROFESSIONAL EXPERIENCE

- State of Arizona  
Arizona Department of Water Resources - Deputy Director and Director - 8/94 - present  
Arizona Department of Environmental Quality - Director, Administration Division – 7/90 – 8/94  
Arizona Executive Budget Office - Budget Analyst and Director – 8/78 – 7/90
- Arizona Air National Guard - Personnel Management Officer– 3/77-8/78
- City Of Phoenix - Operations Analyst III - Office Of Management And Budget – 9/71-3/77
- Goodyear Aerospace Corporation – Industrial Engineer – 7/68 – 8/71

#### EDUCATION

MPA with emphasis in Public Budgeting and Personnel, Arizona State University

BS, Business Administration, emphasis in Economics and Statistics, Arizona State University

#### MILITARY EXPERIENCE

Arizona Air National Guard – Lieutenant Colonel (ret.) with 30 years service, 161<sup>st</sup> Air Refueling Wing. Veteran of foreign conflicts and NATO operations. Extensive protocol relations with national and international media, as well as foreign governments.

### Assistant Director For Water Management

JAMES M. HOLWAY

Responsibilities include overseeing the Water Management Division's five regional offices as well as the state's assured water supply, recharge, well permitting, and surface water rights programs.

#### PROFESSIONAL EXPERIENCE:

- Arizona Department of Water Resources  
Assistant Director for Groundwater Management – 2/96 - present  
Supervisor, Planning & Special Studies – 1/93-2/96
- Arizona State University Faculty Associate - Planning Department – 1993 and 1996
- Baltimore Regional Council of Governments - Coordinator, Environmental Planning – 6/90-4/92
- University of North Carolina Department of City & Regional Planning – 7/89-4/90
- California Polytechnic State University – Visiting professor, San Luis Obispo City & Regional Planning Department – 8/88-6/89

#### EDUCATION

Ph.D. and Masters in Regional Planning, University of North Carolina, Chapel Hill

BA Political Science, Cornell University

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**Assistant Director and Chief Information Officer****RANDY A. WILEY**

Responsibilities include overseeing Information Technology units, including the Customer Support Help Desk, Network Support, Application Development, Web Development and Planning/Administration.

**PROFESSIONAL EXPERIENCE:**

- Arizona Department of Water Resources - 3/95–present
- Northern Automotive, Inc., Phoenix – Senior Analyst - 5/94-3/95
- America West Airlines, Phoenix - Senior Analyst - 12/90-5/94, excluding 3/92-4/93
- MTC Inc., Lisbon, NY - Operating Manager, Iroquois Farm / Tilden Stage - 3/92-4/93
- Adolph Coors Brewing Company, Golden, CO - Application Development Team Leader - 3/85-6/90
- FirstBank Holding Company, Lakewood, CO - Programmer/Analyst - 6/83-3/85
- Transport Insurance Company, Dallas, TX - Programmer - 7/81 - 6/83

**EDUCATION**

Regis College, Denver - Management major; computer science minor - 12/88-6/90

Texas Institute of Technology - Technical Certificate - Management Information Systems Dallas - 1/81-7/81

North Texas State University, Denton, TX - Business Administration major - 9/69-5/72

**Assistant Director, Statewide Water Planning****HERB DISHLIP**

Responsibilities include advising the Director in establishing and implementing long-range water policy for the state and representing Arizona in discussions about Colorado River issues and Indian water rights settlement

**PROFESSIONAL EXPERIENCE**

- Registered professional engineer
- Arizona Department of Water Resources – 1981-present
  - Assistant Director for Statewide Water Planning – April 1996-present
  - Deputy Director for Water Management – 1985-96
  - Assistant Deputy Director for Water Management – 1983-85
  - Pinal AMA Director – 1981-83
- U.S. Bureau of Reclamation – Arizona and Colorado – 1972-81

**EDUCATION**

BS Civil Engineering, University of Iowa

**Assistant Director, Hydrology****GREGORY L. WALLACE**

Responsibilities include supervising the Hydrology Division, representing ADWR in public forums and appearing as an expert witness in court cases.

**PROFESSIONAL EXPERIENCE:**

- Assistant Director 4/95-present
- Chief Hydrologist 4/86–4/95
- Water Resources Division Director - Association of Central Oklahoma Governments - 3/80-1/86

**EDUCATION:**

Certified Public Manager, Arizona State University - 12/91

Certified Professional Geologist – 7/85

BS in geology, University of South Dakota at Vermillion – 7/79

**Acting Chief Counsel****WILLIAM P. SCHIFFER**

Responsibilities currently include management of the Office of Legal Services, including legal counsel, technical staff and the ADWR docket supervisor, representing ADWR and supervising all litigation, legal advisor to the director and staff in all program areas, and counsel for director in final administrative decisions after hearings. Also continuing responsibilities of assistant chief counsel, specializing in Groundwater Code, Underground Storage and Recovery, Water Exchanges, tort liability, personnel, leases and drafting of rules and legislation.

**PROFESSIONAL EXPERIENCE:**

- ADWR Assistant Chief Counsel 1989-2002
- ADWR Deputy Counsel 1985-1989
- Community Legal Services, Inc., Attorney 1976-1985
- Law clerk for Hon. Mary M. Schroeder, Arizona Court of Appeals 1975-1976

**EDUCATION:**

JD, College of Law, Arizona State University, cum laude 1975

BS, Business Administration, Arizona State University, with distinction 1972

**Legislative Liaison/Ombudsman**

PATRICIA S. HILL

Responsibilities include coordinating the development of ADWR legislation, representing the ADWR's position on legislative proposals, coordinating and providing testimony on legislation, preparing the Annual Report, and providing administrative and policy development support to the Director and Assistant Directors. Acts as Ombudsman and responds to constituents concerns.

**PROFESSIONAL EXPERIENCE**

- Arizona Department of Water Resources – Legislative Liaison/Ombudsman – 12/99 - present
- Arizona Community College Association – Executive Director – 9/92-12/99
- Arizona House of Representatives –Minority Staff – 12/87-9/92
- County Supervisors Association – Administrative Assistant – 1/86-11/87

**EDUCATION**

MBA, Arizona State University – 12/82

BA, Arizona State University – 5/79

**Manager, Arizona Water Banking Authority**

TIMOTHY J. HENLEY

Responsibilities include overseeing and managing the activities of the Arizona Water Banking Authority. Chairperson of the Colorado River Salinity Control Forum's Work Group.

**PROFESSIONAL EXPERIENCE:**

- Arizona Water Banking Authority – Manager – 6/96 - present
- Arizona Department of Water Resources – ADWR representative on interstate water issues, including Colorado River and Central Arizona Project- 4/84 – 5/96
- U.S. Bureau of Reclamation, Lower Colorado River Region – 6/75 – 4/84
- Registered Civil Engineer in California and Arizona – 3/03

**EDUCATION:**

BS in Civil Engineering, California State University – Sacramento



**Manager, Arizona Water Protection Fund**

RODNEY J. HELD

Responsibilities include program management and administration of the Arizona Water Protection Fund (AWPF) and supervision of staff. Advise the AWPF Commission on development and implementation of program policy and concurrence with the Arizona Department Water Resources. Coordinate AWPF Commission activities.

**PROFESSIONAL EXPERIENCE**

- State of Arizona  
Arizona Department of Water Resources – Program Manager, AWPF 11/01 – present  
Arizona Department of Water Resources – Project Manager, AWPF 03/99 – 11/01  
Arizona Department of Environmental Quality, Environmental Health Specialist II, 08/97 – 03/99
- CLR Medical & Security Systems, Inc., General Manager 06/87 – 08/97

**EDUCATION**

MS, Environmental Resource Management with emphasis in riparian ecology, Arizona State University, 08/97  
BS, Environmental Resource Management with emphasis in wildlife habitat management, Arizona State University, 05/95

## COMMISSION/BOARD APPOINTMENTS & TERMS

### Groundwater Users Advisory Councils (GUACs)

The GUACs are appointed by the Governor pursuant to A.R.S. 45-420 to represent the water users in the AMAs and to provide advice to the Director (see table below). Key statutory requirements include commenting on the annual groundwater withdrawal fee, the annual Plan of Operation for the Arizona Water Banking Authority, the expenditure of funds in the Conservation, Augmentation and Monitoring funds for the AMAs and the AMA management plans.

<i>Phoenix AMA</i>	<i>Stephen Cleveland</i>	<i>Municipal</i>	<i>1/16/2006</i>
	<i>William Rodie</i>	<i>Golf Course Industry</i>	<i>1/19/2004</i>
	<i>John Williams, Jr</i>	<i>Salt River Project</i>	<i>1/16/2006</i>
	<i>F. Ronald Rayner</i>	<i>Agriculture</i>	<i>1/21/2008</i>
	<i>Frank Fairbanks</i>	<i>Municipal</i>	<i>1/21/2008</i>
<i>Pinal AMA</i>	<i>Oliver Anderson</i>	<i>Agriculture</i>	<i>1/21/2008</i>
	<i>Henry Perales</i>	<i>Municipal</i>	<i>1/19/2004</i>
	<i>Paul Prechel</i>	<i>Agriculture</i>	<i>1/16/2006</i>
	<i>Steve Pretzer</i>	<i>Agriculture</i>	<i>1/16/2006</i>
	<i>David Snider</i>	<i>Municipal</i>	<i>1/16/2006</i>
<i>Prescott AMA</i>	<i>Marvin Larson,</i>	<i>Developer</i>	<i>1/21/2008</i>
	<i>James Neal</i>	<i>Private Citizen</i>	<i>1/21/2008</i>
	<i>John Olson</i>	<i>Agriculture</i>	<i>1/16/2006</i>
	<i>Larry Tarkowski</i>	<i>Municipal</i>	<i>1/16/2006</i>
	<i>Carl Tenney</i>	<i>Municipal</i>	<i>1/19/2004</i>
<i>Santa Cruz AMA</i>	<i>Simon Escalada</i>	<i>Developer, Rancher</i>	<i>1/17/2006</i>
	<i>James Barr</i>	<i>Developer</i>	<i>1/19/2004</i>
	<i>Ron Fish</i>	<i>Agriculture</i>	<i>1/21/2008</i>
	<i>Roy Ross</i>	<i>Developer</i>	<i>1/19/2004</i>
	<i>Sherry Sass</i>	<i>Friends of Santa Cruz</i>	<i>1/21/2008</i>
<i>Tucson AMA</i>	<i>Alan Lurie</i>	<i>Homebuilder's Assoc.</i>	<i>1/16/2006</i>
	<i>David Modeer</i>	<i>Municipal</i>	<i>1/16/2004</i>
	<i>Dee O'Neill</i>	<i>Private Citizen</i>	<i>1/19/2008</i>
	<i>Jon Post</i>	<i>Agriculture</i>	<i>1/21/2008</i>
	<i>Charles Sweet</i>	<i>Municipal</i>	<i>1/21/2008</i>

### **Agricultural Water Conservation Best Management Practices Advisory Committee**

This Committee was appointed by Governor Hull on September of 2002 to advise the Director on the development of an agricultural best management practices (BMP) program. The BMP program was established by the Legislature in 2002, and is an alternative to the standard water allocation conservation program for farmers with Irrigation Grandfathered Rights (see table below).

<i>Farmers</i>	<i>Bryan Hartman, 5/16/2004</i> <i>F. Ronald Rayner, 5/16/2004</i> <i>Scott Riggins, 5/16/2004</i> <i>Ron Wong, 5/16/2004</i>
<i>Irrigation Districts</i>	<i>Stanley Ashby, 5/16/2006</i> <i>Grant Ward, 5/16/2006</i>
<i>Salt River Project</i>	<i>John Sullivan, 5/16/2006</i>
<i>Municipal</i>	<i>John (Bob) McCain, 5/16/2004</i>
<i>Ex Officio</i>	<i>Bert Clemmons (USDA Water Conservation Lab)</i> <i>Sheldon Jones (Department of Agriculture)</i> <i>Joseph C. Smith (Department of Water Resources)</i>

### **Arizona Water Banking Authority**

Please see separate Transition Report, attached.

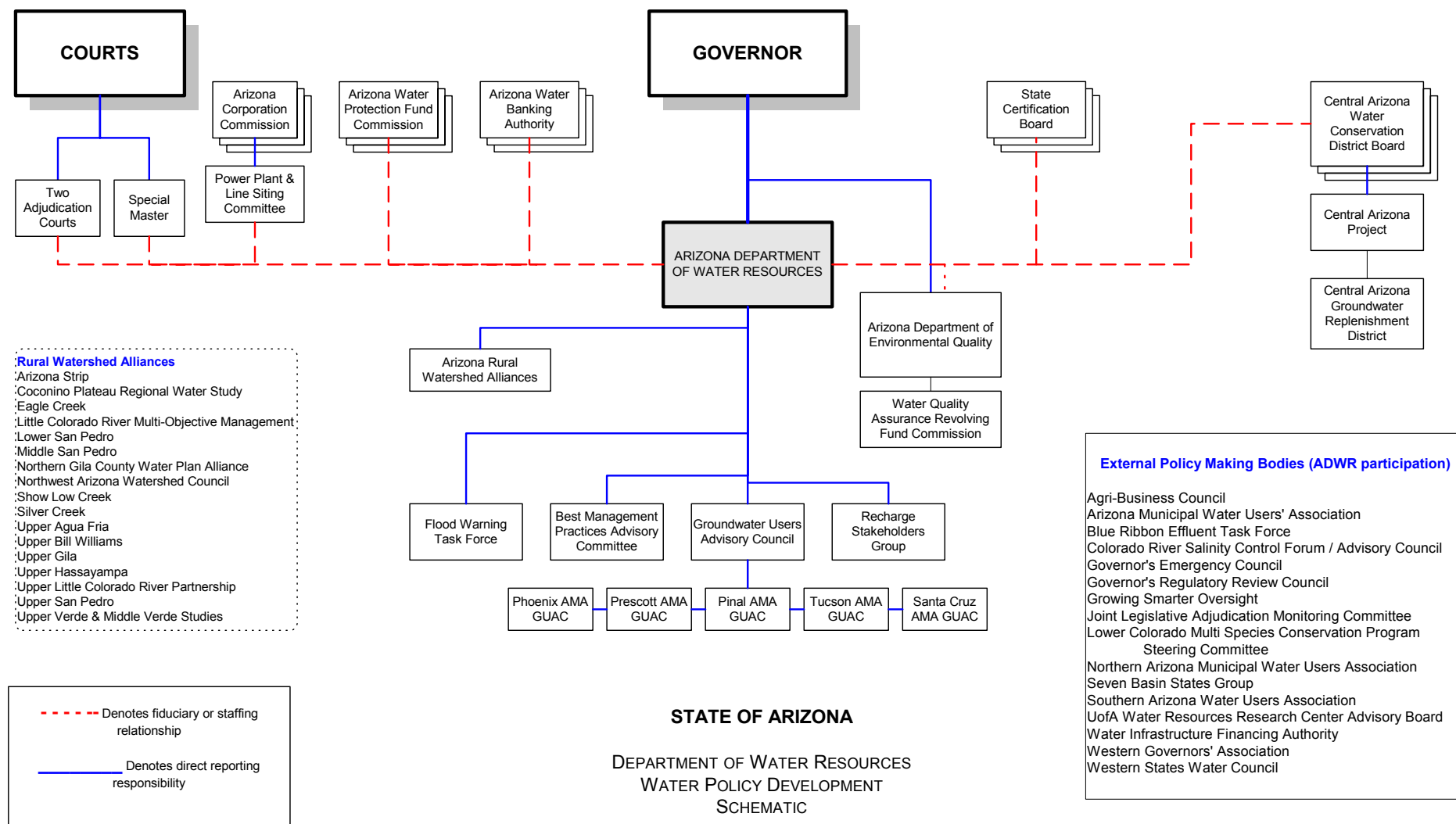
### **Arizona Water Protection Fund Commission**

Please see separate Transition Report, attached.

### **Other Advisory Groups**

ADWR is strongly committed to working closely with the regulated community and other interest groups in developing its water management programs, and seeks input from advisory committees on a regular basis. For example, when writing a management plan, ADWR establishes advisory groups from the regulated community to provide input on development of conservation requirements for each sector. During the Third Management Plan development, 15 advisory committees were established. The flow chart on the next page depicts some of the relationships between ADWR and other water management entities and advisory groups.

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## GOALS, RESULTS & INDICATORS

### Arizona Department of Water Resources Policy and Operational Goals

The following goals relate to the Mission Statement that appears on Page 8

1. To maximize usage of Arizona's Colorado River entitlement and other renewable water supplies.
2. To decrease mining of groundwater within the Active Management Areas.
3. To ensure that dam design, construction, operation, and maintenance are in compliance with state laws and current dam safety guidelines.
4. To collect, analyze and disseminate high quality data in support of surface water and groundwater rights administration, hydrologic investigations, planning activities and the adjudication courts, and to prevent unauthorized uses.
5. To incorporate water quality objectives into water management in coordination with the Arizona Department of Environmental Quality.
6. To manage the agency's financial and staff resources to maximize efficiency and effectiveness.

### Results, Indicators and Accomplishments (See Appendix 3)

**Appendix 3 lists the key indicators and implications (performance measures) for each section within ADWR, including the results for Fiscal Year '02 (July 1, 2001-June 30, 2002). The major accomplishments for each section during the last five years are also listed. In cases where a section's performance cannot be measured quantitatively, the activities of the section are listed.**



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**ADWR Goal-Related Activities****1. To maximize usage of Arizona's Colorado River entitlement and other renewable water supplies.**

The three programs that have the greatest effect on increasing the use of Colorado River water are the Recharge Program, the Arizona Water Banking Authority and the Assured Water Supply Program. The Recharge Program, established in 1986, encourages Colorado River water and effluent to be stored underground for future use. This program regulates the development of storage and recovery facilities, protects the ownership of stored water, and provides technical assistance in developing recharge facilities. Over three million acre-feet of water have been stored since 1986. Three major units within ADWR, Hydrology, Legal Services, and Water Management, support the Recharge Program. ADWR provides staffing and technical support to the Arizona Water Banking Authority (AWBA). The AWBA is described in a separate transition report (attached). Since 1996, the AWBA has worked to store excess CAP water to benefit communities along the Colorado River, water users within the AMAs, Indian tribes and other states (with full protection of Arizona's water rights). The AWBA has stored 1,273,480 acre-feet to date. The Assured Water Supply (AWS) Program within Water Management (with support from the Water Resources Section of Hydrology and Legal Services) requires that all new subdivisions within AMAs demonstrate that they have a 100-year supply of water of adequate quality and quantity prior to plat approval (or be served by a water provider that has already made a similar demonstration). The AWS Rules, adopted by ADWR in 1995, require that the water used in this demonstration be primarily renewable. A major source of water for this demonstration is CAP water; the AWS Rules have been the primary driving force behind substantial investments in the use of CAP water and effluent for municipal supply. In addition, ADWR administers programs that encourage the use of CAP in lieu of groundwater. The pricing policies of the CAP have also expanded agricultural CAP water use. The Colorado River Office monitors all intra- and inter-state activity related to the River, represents the state in technical and policy matters, and ensures that Arizona's interests are protected.

**2. To decrease mining of groundwater within the Active Management Areas.**

There are two components of the program for decreasing groundwater mining. The supply-side focuses on replacing existing groundwater use with CAP water, other surface water or effluent through the recharge and AWS programs described above. The demand side focuses on reductions in current and future water demand through conservation. The Groundwater Code requires reductions in groundwater use and/or best management practices to ensure water use efficiency for the major water using sectors (agricultural, municipal and industrial) through regulations adopted within the Management Plans for each AMA. Measuring, reporting and conserving water are now required components of all large groundwater-using operations within AMAs. The Water Management Division also has a conservation, augmentation and monitoring assistance program within the AMAs that provides technical assistance and grants to encourage conservation, augmentation (primarily use of effluent, other renewable supplies and recharge) and increased monitoring of water supply conditions and land subsidence.

**3. To ensure that dam design, construction, operation and maintenance are in compliance with state laws and current dam safety guidelines.**

The Office of Engineering oversees dam safety, operations and maintenance, and maintains a flood warning system for the state. Licensed professional engineers and other technical staff perform site inspections and ensure that unsafe dams are repaired to meet safety requirements.

- 4. To collect, analyze and disseminate high quality data in support of surface water and groundwater rights administration, hydrologic investigations, planning activities, inter-agency efforts and the adjudication courts, and to prevent unauthorized uses.**

ADWR has management responsibilities for both groundwater and surface water. The Water Management Support Unit processes surface water rights claims other than those along the Colorado River and the AMAs manage the majority of the groundwater rights. Most water resource reports and assessments contain a hydrologic data component, and the Hydrology Division collects, analyzes and reports on the majority of the surface and groundwater supply information in the state, often in collaboration with the U.S. Geological Survey. The Hydrology Field Services Section specializes in collecting groundwater levels, groundwater quality data, and land subsidence information, followed by development of watershed and basin reports and hydrologic models. Water demand information is collected and reported on within the AMAs, while the Statewide Water Planning Division focuses (to a more limited extent) on the areas outside of AMAs. The Office of Legal Services also brings enforcement proceedings against individuals who are not in compliance with the Groundwater Code, ADWR Rules and AMA Management Plan regulations, and negotiates and facilitates Indian Water Right settlements. Historically, ADWR had a large adjudications section that was focused on producing the information required by the courts in the Gila and Little Colorado River adjudications. In the mid-1990's, this section was eliminated, due to legal impediments that slowed progress in the adjudications. In the last two years, the adjudication courts have moved forward with increasing requests for assistance from ADWR. A small unit within the Office of Legal Services provides technical support to the courts and processes claims within the Adjudication.

- 5. To incorporate water quality objectives into water management in coordination with the Arizona Department of Environmental Quality.**

ADWR has a very limited but important role in water quality issues. Current activities include well drilling, permitting and coordination activities related to the Water Quality Assurance Revolving Fund (WQARF), the Environmental Protection Agency's Superfund (CERCLA) requirements, and some data collection and exchange. These activities are primarily within the Hydrology Division.

- 6. To manage the agency's financial and staff resources to maximize efficiency and effectiveness.**

The Office of Administration handles all financial and budget transactions, and the Human Resources Office performs all employee-related activities, including generating hiring lists and providing staff training. The Information Technology Office provides computer systems operation and development, technical support and training, and network and website development and maintenance. ADWR is heavily focused on a transition to the use of technology to reduce costs, improve public access to information and increase productivity.

## CRITICAL CHALLENGES AND OPPORTUNITIES

### SHORT TERM CRITICAL CHALLENGES (LESS THAN ONE YEAR)

#### Staffing Concerns

The agency is significantly understaffed to meet its legislatively mandated requirements and its own goals. Staff turnover has been a constant concern, since ADWR staff are in high demand in both the public and private sectors, which typically are able to pay higher salaries. Although the agency is currently authorized at 207 FTEs, General Fund levels only support 167.5. Most of the recent reductions in staff have come from the agency's professional and management programs. Key directorate level staff (who are critical sources of institutional memory and key negotiators at the intra- and inter-state levels) have recently left ADWR or are planning retirement imminently. In addition to budget cuts, the increasing cost of ADWR's Phoenix building lease is a significant burden (the agency was moved from its former location in a state office building into a private property and received no additional funding to offset increases in rent). Adverse impacts of these staff reductions include: longer permit processing; diminished water rights tracking, monitoring and compliance; less timely and thorough public assistance; reduced outreach activities; limited policy development and analysis; reduced support available for the Rural Watershed Initiative and water quality activities; inadequate ability to provide data and technical support for management decisions; limited ability to implement recommendations of the Governor's Water Management Commission; and limitations on Arizona's ability to protect its water-related interests from interstate, international and other legal challenges.

#### Outstanding Legal Challenges/Lawsuits

ADWR has faced a significant increase in legal challenges in the last five years. As growth in the state continues at a dramatic pace, competition is increasing for the quickly diminishing supply of unallocated water. Increased environmental and neighborhood activism has led to challenges to ADWR permits that are requested by those seeking water supplies for industrial/agricultural users and for existing and new residents. ADWR programs that ensure the efficient use of water and that help stretch available supplies to meet more demands have also been challenged. Administrative appeals and hearings of objections to and denials of permits, and judicial review of those administrative proceedings, are on the increase, particularly in the Assured Water Supply and Recharge Programs.

Two recent lawsuits brought against ADWR assert that Arizona's groundwater laws are insufficient to protect public trust values in surface water flows. An action by the Center for Biological Diversity against ADWR and others, currently pending before the Arizona Supreme Court, is challenging the groundwater laws in general as allowing pumping that diminishes and harms surface water flows contrary to the public trust. A current action in superior court brought by a neighborhood group in the Tucson area is challenging the validity of the Assured Water Supply Program on similar grounds.

In another matter, Phelps Dodge is challenging the authority of ADWR to administer its instream flow program. It has been asserted that ADWR does not have authority to issue instream flow permits and certificates, and that the federal government is not entitled to hold an instream flow permit.

Although progress continues to be made in negotiated settlements on water rights asserted by Indian tribes, the rights of the Fort Yuma (Quechan) Tribe are currently being litigated in *Arizona v. California* before the United States Supreme Court. Recently, there have been some indications that the Navajo Nation may assert water rights on the Colorado River, possibly by applying to the United States Supreme Court under *Arizona v. California*. If pursued by the Navajo Nation, the action could have a significant impact on ADWR's staff and the amount of water that is available for diversion by the Central Arizona Project.

The Office of Legal Services is currently involved in eleven lawsuits, including one before the U.S. Supreme Court. See Appendix 4.

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## **Drought/Rural Water Supply**

Arizona is currently affected by the most severe drought in 100 years. Although some portions of the state have received near-normal rainfall during the monsoon season, experts at the National Weather Service and elsewhere within the National Oceanic and Atmospheric Administration believe that the drought may continue well into next year and possibly longer. Climate experts believe Arizona may be in the beginning stages of a longer-term drought than has been experienced in recent history. Reservoir conditions on the Colorado River and throughout the state are at or near record low levels. The Salt River Project system is experiencing the most severe drought since 1902. This is the first time in the last century that the Salt/Verde River system has been in a drought condition at the same time as the Colorado River system. In addition to increased wildfires (the Rodeo-Chedeski fire was the largest in the state's history) the drought has resulted in huge economic impacts on rural areas that do not have supplemental water supplies. Water supply conditions are critical in Flagstaff, Prescott, Williams, Mayer, Payson, Pine-Strawberry and other communities on the Mogollon Rim. Although the extensive investments in water supply infrastructure for the Phoenix and Tucson areas has provided substantial protection from the current drought, rural areas of the state do not have an adequate drought response or mitigation plan.

Even in the absence of drought, water supply conditions in the communities of rural Arizona are a serious problem. Growth rates are very high, with projected continued growth in many communities that do not have the water supplies or the financial resources to sustain it. There are inadequate mechanisms to ensure availability of water supplies to support growth in the rural areas of the state. In addition, increasing demands for groundwater will continue to impact important springs and surface water flows that support riparian areas and recreation.

The Governor's Water Management Commission recommended that ADWR significantly expand the resources that are committed to assisting rural Arizona in meeting its long-term water management needs. Lack of funding has significantly impacted ADWR's efforts, but a new initiative to evaluate the adequacy of water supplies for future growth in the rural communities is under way. An inter-agency statewide drought plan modeled on those of other western states should be developed.

## **Notice of Intent to Drill and Well Inspection Program**

Recent layoffs have significantly affected ADWR's program for processing Notices of Intent to Drill and Abandon wells, and site inspections for new wells. ADWR is currently re-designing its program, intending to limit any disruption in well-drilling and abandonment activities.

## **Third Management Plan (TMP) Modification and Adoption of Rules**

AMA staff and the Office of Legal Services are working toward a statutorily required modification of the TMP in the next calendar year. The TMP modifications include significant revisions to the Agricultural Conservation Program (described below) and the Water Management Assistance Program, and minor corrections in the Municipal and Industrial program chapters. Plan modification is a legal and administrative process that requires review by the GUACs in each AMA, a public hearing and comment period, and formal opportunities to make objections. New rules and management plan modifications are also being developed to achieve the unique goals of the Santa Cruz AMA.

## **Implementation of the Agricultural Best Management Practices (BMP) Alternative Conservation Program**

Legislation passed in 2002 (HB 2022) requires ADWR to establish an Agricultural BMP Alternative Conservation Program for the Third Management Period. This voluntary program requires qualifying participants to implement specific physical improvements and management practices, and waives the allotment requirements of the Base Program. Implementation of this new and fundamentally different program will require dedication of AMA staff to establish procedures for processing and verifying enrollment requirements, monitor compliance, modify tracking databases, and evaluate program performance for possible inclusion for the Fourth Management Period (2010 to 2020). This work will also involve consultation with the statutorily created BMP Advisory Committee.

### **Upper San Pedro Basin Report**

Staff is completing a two-year study of the Upper San Pedro Basin to determine if conditions exist that meet the statutory criteria for designation as an active management area. This review has involved public outreach, extensive research and substantial staff resources. The effort will culminate in a Hydrology Report and in an AMA Review Report. The AMA report will contain a recommendation on whether the Director should designate the basin as an AMA. This study will contribute important information and updated population, water supply and water demand data that is of benefit to ADWR, the public, research institutions, other agencies and resource planning activities in the basin, including the work of the Upper San Pedro Partnership.

ADWR reviewed the Basin for potential designation as an AMA in the mid-1980's and concluded that the issue should be revisited in 10-15 years. The reports will be released early in calendar year 2003.

## LONG-TERM CRITICAL CHALLENGES AND OPPORTUNITIES

The following long-term water management issues are currently of concern.

### GROUNDWATER CODE ISSUES

#### Long-Term Issues Affecting all Active Management Areas

##### *Achievement of AMA Management Goals*

The ability to achieve and maintain the long-term management goals within the AMAs is a key water management consideration for the state, and there is some question about the ability to meet these goals. Substantial progress has been made to date through use of renewable supplies, conservation programs and conversion of rights. Continued efforts will be required, but ADWR's projections show shortfalls in those efforts (see Appendix 8, projected water budgets for the AMAs.)

- In the Phoenix AMA, all credible projections for the year 2025 show continued overdraft conditions, though reduced from current levels.
- Projections for the Tucson AMA also show greatly reduced overdraft in 2025, but use of CAP water will need to dramatically increase.
- The Pinal AMA's dual goal of maintaining the agricultural economy while preserving future municipal and industrial supplies can likely be met, though there are concerns about storage and recovery of renewable supplies, drought provisions and the need to modify the Assured Water Supply criteria to ensure sustainable supplies for municipal growth.
- In the Prescott AMA, current uses and commitments to serve new subdivisions will result in groundwater demands that are more than double the long-term sustainable supply of groundwater.
- In the Santa Cruz AMA, the goal of maintaining a safe-yield condition and local water levels is hampered by complex hydrology (inability to distinguish between surface water and groundwater), lack of adjudication of surface water rights, uncertainty of continued delivery of effluent from Mexico and the need to amend the Assured Water Supply Rules.

Achievement of the AMAs' statutory goals and ensuring adequate, dependable water supplies will require continued development of both regulatory and non-regulatory programs and policies. In many cases ADWR's ability to influence critical water management decisions is both indirect and insufficient. Cooperative efforts with regional entities and technically sophisticated long-term planning will be critical to achieving the AMAs' water management goals.

##### Use of Renewable And Alternative Supplies

Conversion to non-groundwater sources is the single most important means of achieving the management goals within the AMAs. The Assured Water Supply requirements are the major tool ensuring that new subdivisions in the AMAs use renewable water supplies. To continue recent positive trends, additional opportunities will need to be pursued to substitute renewable or imported supplies in place of mined groundwater. Expanding the types of users with mandatory replenishment obligations is an approach that has been considered in all of the AMAs and by the Governor's Water Management Commission (GWMC). In both the Santa Cruz and Prescott AMAs, where access to renewable supplies is very limited, there is community interest in forming water management authorities to facilitate the importation, transfer and allocation of regional supplies.

##### Allowable Pumping



The Code allows most existing right-holders to pump groundwater without a replenishment obligation, and without regard to the impact on the management goal. In addition, a few types of new pumping are allowed, including General Industrial Use permits and exempt wells, even in areas experiencing overdraft.

### Goal Refinement

The management goals of the Pinal and Santa Cruz AMAs are unique and require additional refinement. The Pinal AMA goal has two components: preserving the agricultural economy for as long as feasible, and ensuring that municipal and industrial uses have a reliable and sustainable water supply in the future. The Santa Cruz AMA management goal requires management of local water levels as well as maintenance of the safe-yield condition. These goals add complexity and some ambiguity to the administration of ADWR's programs, including recharge and recovery, and most pressing, the Assured Water Supply Rules. The Pinal AMA's existing AWS rules over-allocate groundwater supplies, and the Santa Cruz AMA has not yet adopted AMA-specific AWS rules and well-spacing criteria related to consistency with the management goal.

### *Sub-Area Issues*

The management goals of the AMAs are administered on an AMA-wide basis and do not fully take into account localized conditions (with the partial exception of the Santa Cruz AMA). Safe-yield in the Phoenix, Tucson and Prescott AMAs would provide some overall level of resource sustainability, but would not prevent localized declines in groundwater levels and the associated adverse impacts.

### Physical Availability

There are currently portions of the Phoenix AMA, such as the Carefree Sub-basin, which do not have sufficient groundwater supplies to demonstrate a 100-year assured supply. In other areas, notably in the Prescott AMA, shallower domestic wells run dry due to intensive groundwater pumping and drought conditions (many areas lack access to adequate groundwater supplies even in the absence of drought conditions). As further development takes place, the number of locations that are facing similar problems will increase. Over-allocation of existing supplies could also result in supply constraints and disruptions in areas that are not growing.

### Land Subsidence

Land subsidence and fissuring is one of the most serious consequences of overdraft. The Phoenix, Pinal and Tucson AMAs all have measurable and ongoing levels of subsidence, and there are well-documented cases of damage to transportation, water, sewer and flood-control infrastructure. A notable example is the greater than 15 feet of land subsidence which has occurred in the vicinity of Luke Air Force Base since the 1950's. Preventive measures, including use of renewable supplies, conservation and monitoring and well spacing rules, and designing infrastructure to deal with anticipated subsidence can be cost-effective alternatives to infrastructure repair. However, damage to the aquifer associated with subsidence may be irreversible.

### Riparian Habitat and Perennial Flow

The riparian habitat associated with perennial and intermittent streams is among Arizona's most prized assets. Though there are relatively few naturally occurring areas remaining within the AMAs, there is growing community recognition of their ecological, cultural and economic value. There is currently no legal authority to regulate groundwater pumping adjacent to these areas.

### Waterlogging

Portions of the Phoenix AMA suffer from poor drainage and water levels at or near the land surface. Natural geologic formations, coupled with water use patterns, result in waterlogging in the vicinity of the Buckeye, Arlington and Saint Johns Irrigation Districts. Though there are statutory provisions designed to mitigate the problem, waterlogging is an ongoing threat to agricultural productivity and to sub-surface infrastructure.



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### Water Quality

Though often considered separately, there is an intimate connection between water quality and quantity. Groundwater contamination from municipal, industrial and agricultural processes is a concern in all of the AMAs. There is also an emerging awareness of constituents in effluent, including pharmaceuticals, disinfection by-products and viruses that may harm water supplies. In addition to the numerous human-caused pollutants that diminish or restrict the use of supplies, increased salinity associated with CAP water and effluent reuse is a concern in some areas.

### *Coordination*

Water issues are invariably complex and multifaceted. Effective water management requires coordination to avoid inefficiencies arising from multiple supply sources, a complex regulatory environment, and occasionally conflicting policy objectives. As the regional representatives of ADWR, AMA staff are often in a unique position to assist in coordination. Participation levels range from publicizing and hosting meetings, to providing technical and analytical support, to initiating and encouraging new regional partnerships. Existing staffing reductions have already curtailed the degree to which the AMAs can effectively serve in this capacity, to the long-term detriment of management of the state's water resources.

### Regional Partnerships

The geographic and economic scale of many water resource issues lend themselves to regional solutions. ADWR's broad role in water management has often proven helpful in bringing together disparate interests. The AMAs are involved in a broad range of cooperative efforts dealing with policy, planning and outreach (see page 47 in Appendix 3). Failure to maintain this role may delay or jeopardize resolution of regional issues.

### Inter-Agency

Key water resource management responsibilities are split among many federal, state and local agencies. Coordination of agendas is currently inadequate, and encouraging a cooperative atmosphere for long-term planning is a high priority. Key state and federal water management agencies include the Central Arizona Water Conservation District, the Central Arizona Groundwater Replenishment District, the Arizona Water Banking Authority, the Arizona Department of Environmental Quality, the Arizona Corporation Commission, the Environmental Protection Agency, the International Boundary Water Commission, the Bureau of Reclamation, and ADWR.

### Involvement of Regulated Community

ADWR has consistently made a commitment to include stakeholders in the review, modification and development of programs and policies. In addition to the statutorily-established Groundwater Users Advisory Councils (GUACs) in each AMA, both formal and ad hoc groups exist to ensure open dialog between ADWR and the regulated community. The existence of these forums, and the trust they help establish, have been instrumental in gaining support for key programs and policies sought by ADWR. However, the agency's ability to maintain these forums and relationships is affected by staffing limitations.

### Bi-National

There are serious long-term water supply issues in the U.S. - Mexico border region that have become critical. Water use and population growth in Mexico affect Arizona's water resources and water management efforts. This issue most directly affects the Santa Cruz AMA, which relies heavily on the effluent generated within Sonora and on surface water inflows in the Santa Cruz River. Mexico retains a legal treaty right to its effluent, but this supply, which is treated at the International WWTP in Nogales, Arizona, is discharged in the Santa Cruz AMA. Long-range planning and supply reliability are compromised by the uncertainty of that supply. Coordination with water users and federal, state and local agencies regarding conservation, supply planning for drought and growth is necessary. Other international activities, including those of the International Boundary Water Commission can significantly impact Arizona and require close attention.

### *Monitoring and Planning*

Water management decisions are increasingly reliant on predictive modeling and more sophisticated sources of data. ADWR has made considerable investments and progress in developing technical capabilities, but the quality and completeness of some of ADWR's data, notably water budget information for the Phoenix and Prescott AMAs, have been challenged by parties disputing ADWR's programs and policies. These data sources form the foundation of many critical programs and planning efforts both within ADWR and externally. Ensuring the quality of those baseline data is an ADWR priority.

### Recharge and Recovery Planning

The recharge and recovery program has been a major policy success, allowing renewable supplies, particularly CAP water, to be put to use much more extensively and less expensively than would have otherwise been possible. Recharge has also been the mechanism by which the Arizona Water Banking Authority has fulfilled the crucial objective of putting Arizona's entire Colorado River allocation to use. However, there is an ongoing and increasingly urgent need to engage in long-range planning for recharge and recovery. Some three million acre-feet have been stored in the central AMAs and there are issues related to how that stored water will be recovered and the longer-term effects of large-scale recharge and recovery. The two non-CAP AMAs (Prescott and Santa Cruz) have more limited opportunities for recharge, but have pressing needs to manage supplies in ways that could be assisted by storage and recovery. As many areas of the state become increasingly dependent on recharge and recovery, it is critical that recharge activities and utilization of storage space in our aquifers be optimized to best meet the state's land and water use needs.

### Hydrologic Modeling

The Hydrology Division has developed groundwater models for each of the AMAs. The AMAs have acted in a supportive role to the Hydrology Division in the development of scenarios of future conditions. This work, in conjunction with creation of projected water budgets, is an important part of how trends, policies, and proposed water resource investment programs are analyzed and evaluated. The reasonableness and utility of projections depends on detailed input from staff with different program responsibilities, and a high degree of quality control, both of which can suffer without adequate resources. In addition, the models that have been developed are not as fully utilized as they could be if staffing constraints were not so severe.

### Data Collection, Tracking And Dissemination

The AMAs bear primary responsibility to collect and analyze annual groundwater use data. The size and complexity of these activities have grown considerably over time. The AMAs must collect and track data that retains unique hydrologic and legal characteristics and integrate the data with hydrologic modeling, program administration, compliance and water budget development activities. In cooperation with Hydrology staff, each of the AMAs has recently expanded its commitment to comprehensive aquifer monitoring and implementing improvements to database design. The Hydrology Division now produces annual monitoring reports for the

Prescott and Santa Cruz AMAs. In addition to increasing the accuracy of the data, efforts are being made to ensure that data can be disseminated in ways that are accessible to both technical and general audiences.

## EXTERNAL ISSUES AFFECTING ARIZONA'S WATER FUTURE

### California 4.4 Plan

Arizona must protect its long-term Colorado River supplies by insisting that California reduce its annual water uses from over 5.2 million acre-feet (MAF) to 4.4 MAF. The Secretary of the Interior has adopted Interim Surplus Guidelines (ISG) that allocate surplus Colorado River water to California while it gradually reduces its annual water uses from 5.2 MAF to 4.4 MAF over the next 15 years. The ISG require that California adopt a set of comprehensive agreements called the Quantification Settlement Agreement (QSA) by December 31, 2002 to demonstrate that it can implement the reductions over the 15-year period. If the QSA is not adopted, the ISG surpluses will be suspended and California will have to reduce its water use immediately. Also, California agricultural agencies have to meet certain benchmark reductions that are stated in the ISG. ADWR represented the state in the negotiations that led to this compromise. The first benchmark occurs in 2003. If the benchmarks are exceeded, the ISG surpluses are suspended until the California agricultural agencies comply. Before the QSA can be signed, California and the US Bureau of Reclamation must approve plans to mitigate the impact of water transfers from the Imperial Irrigation District to San Diego.

Arizona agreed to the ISG under the condition that the Metropolitan Water District of Southern California (MWD) indemnify the State of Arizona against any increased risk of shortage caused by the overuse of California's normal apportionment of 4.4 MAF. An agreement between the State of Arizona and MWD was signed May 23, 2001.

ADWR must continue to monitor the progress of California to implement the QSA and ISG requirements, support the federal government in its compliance efforts and stand ready to use all legal and political remedies to protect the state's interests.

### Mexico

Increasing water demands in Mexico are creating political pressures to increase water deliveries to Mexico, impacting the amount and dependability of Colorado River water supplies available to Arizona. The 1944 Treaty with Mexico apportions 1.5 million acre-feet (MAF) of Colorado River water in normal years to Mexico, and 1.7 MAF in surplus years. Minute 242 of the Treaty requires that the U.S. deliver water at the Northerly International Boundary of a quality not to exceed 115 parts per million total dissolved solids (+/-30) greater than the quality of water at Imperial Dam.

Within Mexico, approximately 2.5 million people and nearly 500,000 acres of agricultural land are completely dependent on the Colorado River. Most recently, the Mexican Government has submitted a diplomatic note requesting surplus water under the ISG. Non-governmental agencies in the U.S. and Mexico, and the Mexican Government are now requesting water from the U.S. to restore and maintain habitat in the Colorado River Delta. Non-governmental organizations are also requesting more water from the U.S. be provided to Mexico for environmental purposes. For example, the U.S. has been sued by the Defenders of Wildlife to extend the application of the Endangered Species Act to impacts within Mexico, with the intent to deliver more water to Mexico for environmental purposes.

Mexico and the U.S. signed Minute 306 in the year 2000 requiring the two countries to study the environmental water needs of the Colorado River Delta within Mexico. Arizona is participating with the other 6 basin states to monitor the discussions and provide input to the U.S. International Boundary Water Commission (IBWC) regarding protection of the water supplies available to the states.

To comply with Minute 242, the U.S. is currently discharging, via a bypass canal, large amounts of Colorado River water to Mexico that could be reclaimed by operating the Yuma Desalinization Plant (YDP). Recent studies by ADWR indicate that this action significantly increases the risk of shortage to the CAP. The CAP and Yuma districts have issued policy statements that request the federal government to operate the YDP. Operation of the YDP is less expensive than

alternatives such as land fallowing to offset the bypass. Operation of the YDP also conserves water and does not impact the availability of water to the states. The water that is bypassed to Mexico supports the Cienega de Santa Clara wetlands. If the YDP is operated, the water supply to the Cienega will be reduced significantly and the impact will require mitigation.

ADWR should advocate for better water management in Mexico, and advocate for the operation of the YDP. ADWR should meet with Arizona water districts and the CAP to explain the YDP and its operation, and participate in interstate discussions to create a consensus about the position of the seven Colorado River basin states. ADWR should meet with the U.S. Bureau of Reclamation and IBWC to advocate for protection of basin water supplies while working towards environmental protection, and continue to collect information and analyze data from Mexico to determine the impact of U.S./Mexico actions and policy positions on the availability and dependability of Colorado River water to Arizona.

### **Inter-basin Water Transfers Between the Upper and Lower Colorado River Basins**

The Colorado River Compact of 1922 divided the Basin into the Upper and Lower Basins and apportioned 7.5 MAF to each. Arizona's entitlement comes primarily from the Lower Basin apportionment. Proposals are occasionally made to use water apportioned to the Upper Colorado River basin in the lower basin and vice versa. The Colorado River Compact prohibits these water transfers. However, Utah and New Mexico have need to use their upper basin apportionments in parts of their states that lie in the lower basin. Both states may request to use the dispute resolution section of the Compact to resolve their issue. If so, the Arizona Legislature will have to approve the action. The states may also ask Congress to authorize the water transfer as part of pending Indian water rights settlements. If so, Arizona will have to advise its delegation about the position of the State of Arizona. Given the limited scope of the proposed action and the benefits to the other states, Arizona is favorably considering the proposal, but concerned that the action not be expanded beyond the current proposals.

These issues are very important to Arizona for two reasons. First, increased water uses caused by the transfer of water to the Lower Basin will impact the dependability of water supplies to Arizona. There is tremendous demand for water in California and Nevada. Opening the Compact to general inter-basin transfers would be highly detrimental to Arizona. Second, Arizona needs to support the Upper Basin states, which are opposed to inter-basin transfers because such transfers would reduce water available to the Upper Basin states. Arizona has allied with the Upper Basin states for many decades in our successful efforts to protect the state's vital interests in negotiations with California, and this relationship is essential for the foreseeable future.

## **COLORADO RIVER ISSUES - INTERNAL**

### **Water Allocations**

ADWR is responsible for making recommendations to the U.S. Secretary of the Interior regarding the allocation of Colorado River water to mainstream water users and to customers of the Central Arizona Project (CAP). ADWR also makes recommendations on the transfers of CAP water allocations based on substantive policy statements. In 2002, Arizona will use its entire 2.8 MAF allocation of Colorado River water. Several ADWR activities are necessary to ensure that the state will not exceed its entitlement.

- Unauthorized water uses must be either curtailed or given the authority to continue.
- Annual water use accounting must be coordinated between the mainstream water users and the CAP to optimize water deliveries.
- New water allocations for the CAP and mainstream users need to be recommended.
- Water transfers must be reviewed and recommended.
- A new water transfer policy must be recommended for mainstream entitlement holders.

All Colorado River water users must have a contract with the Secretary of the Interior to use Colorado River water. Several large water users on the river do not have contracts and are considered unauthorized water users. Also, many small well owners are withdrawing water from the Colorado River and will need to obtain permission to continue to use water. The Bureau of Reclamation (BOR) has begun a two-year rule making process to address unauthorized water users and other water contract administration issues. When BOR adopts its rules, an Arizona law will be activated that will require ADWR to more closely manage and monitor well drilling activities along the river. ADWR will also have to recommend allocations of water to entities that will need contracts to continue their current uses. The reallocation process is an intensive public process involving public meetings, informal hearings and a decision by the director.

ADWR assists the CAP and mainstream districts with annual water use accounting so that the state can maximize its Colorado River water use, but not exceed its 2.8 MAF apportionment.

ADWR has adopted a written policy for the transfer of CAP water subcontracts, and another policy for the transfer of mainstream contracts is pending adoption. ADWR also makes recommendations regarding the allocations of water to municipal CAP customers. The last allocation recommendations were made in 1999 and are contained in Senator Kyl's Bill S. 2992. This Senate Bill also contains an apportionment of 96,295 acre-feet of CAP water to ADWR to be held in trust for the state. ADWR will have to recommend reapportionment of this water at some time in the future.

ADWR should consult with BOR with regard to unauthorized water users, contract changes, water use accounting and water resources policy changes. The primary benefit is the continued protection of Arizona's Colorado River apportionment.

### **Rural Water Management Planning on the Colorado River**

Water resources information is needed to properly recommend allocations and transfers of Colorado River water. In addition, local interests frequently need assistance from ADWR in developing and implementing consensus water management solutions. Recently in the Yuma area, the local water agencies requested assistance to modify the statutes to allow very limited groundwater transfers. These transfers are illegal under current statutes.

The Yuma area irrigation districts, City of Yuma, Yuma County and ADWR meet regularly to discuss water management issues that are critical to the Yuma area. The informal organization is called the Yuma Area Water Resources Management Group. This group meets with the federal Reclamation team to discuss drainage issues, water allocation issues, salinity and desalter issues, and other water related issues.

The Mohave County Water Authority is a subdivision of the state created by statute for the purposes of holding water contracts for Colorado River Water and for allocation of water to member agencies. Within La Paz County there are several small communities and irrigation water users that hold contracts for Colorado River water.

Current issues include:

- Improving drainage pumping in the Yuma area
- Obtaining temporary Colorado River water supplies for the U.S. to offset the desalter bypass flows. The districts want the desalter operated
- Improving consumptive use accounting in the Yuma Area. Reclamation does not properly account for return flows in the Yuma area
- Preparing plans to mitigate water shortages in the Mohave County area
- Transferring water entitlements between water users in all counties. Currently a proposal is being developed to transfer a water entitlement from the Cibola Irrigation District, La Paz County to the Mohave County Water Authority



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## Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a multi-state environmental compliance program. The Program goal is to develop a comprehensive plan to restore the habitat of several endangered species that are found within the floodplain area of the lower Colorado River. Program participants include the lower division states, several federal agencies and tribes.

Two events led to the formation of the LCR MSCP. In 1994 critical habitat was designated within the lower Colorado River for the razorback sucker and the bonytail chub. In 1995, the southwestern willow flycatcher, a migratory bird that utilizes habitat within the Colorado River corridor, was listed as an endangered species. Water and power interests in the three states were concerned that these species would continue to decline and that in response, the federal government would require unacceptable changes to dam operations, power production and water availability.

Arizona seeks National Environmental Policy Act compliance and Federal Endangered Species Act (ESA) coverage for "covered actions". Arizona covered actions include water deliveries pursuant to existing Colorado River water rights, the operation and maintenance of existing facilities, and the contracting for, ordering and scheduling of federal hydroelectric power by purchasers in Arizona to maximize the economic value of such power generation within the constraints of the water release schedule.

The LCR MSCP is intended to assure that the benefits provided by the river to Colorado River communities, CAP subcontractors, power users, and recreational and environmental interests are not unnecessarily reduced in amount or increased in cost. Participation in the LCR MSCP will provide a framework for ESA compliance that supports the state's continued economic growth and development.

The outcome of the MSCP will be major federal legislation that will obligate California, Nevada, Arizona and BOR to a multi-decade project to build critical habitat for several endangered aquatic and terrestrial species. Within two years, Arizona water and power users will have to identify funding sources for the long-term program. In the short-term, the water and power users may request legislative funding of approximately \$150,000 in 2003 to complete Arizona's obligation to the MSCP planning process.

## STATEWIDE WATER ISSUES

### Indian Water Rights Settlements

Tribal claims are based on the federal reserved rights doctrine outlined by the U. S. Supreme Court in the *Winters* case in 1908. When adjudicated, these rights have senior priority dates to most state-based rights. Litigation to quantify Indian water rights claims is a lengthy and expensive process. Settlement of the tribal claims benefits private and public parties by providing the water certainty necessary for long-term economic development. Arizona is currently conducting two massive stream adjudications -- the Gila River (26,500 litigants) and the Little Colorado River (LCR) (3,211 litigants). Settlements may be less expensive than litigation. The greatest benefit of settlements may be the goodwill created by neighboring communities working together for Arizona's future.

Currently, the completed Zuni Tribe settlement in northeast Arizona is awaiting congressional confirmation and funding. Non-Indian settlement parties include three agencies of the state, Salt River Project, Tucson Electric Power, two irrigation districts and three communities. The Gila River Indian Community (GRIC) settlement and amendments to the Southern Arizona Water Rights Settlement Act (SAWRSA) were recently introduced in Congress as part of a larger package to resolve CAP repayment issues and division of the remaining unallocated CAP water between state entities and the federal government. The GRIC settlement will be the largest in terms of dollars and water in the West. Almost 40 entities in six counties have participated in the negotiations. ADWR played an integral role in protecting the rights of state-based water users in reaching all of these settlements. ADWR interacts with the Governor's Office, fellow state agencies, and the Legislature to assure that state interests are fully apprised of settlement activities.

ADWR also has a leading role in the settlement of the claims of the Navajo Nation, the Hopi Tribe, and the San Juan Southern Paiute Tribe within the Little Colorado River (LCR) Basin. Such a settlement would encompass the entire LCR basin from Flagstaff to Springerville. Earlier discussions have included proposed pipelines to bring water from the Colorado River to areas within the Basin. ADWR's role is to protect Arizona's rights to the Colorado River as outlined in the interstate compacts and U.S. Supreme Court cases. Talks also continue with the San Carlos Apaches about uses in the upper Gila River basin, and new discussions with the Tohono O'odham Nation are expected soon for the Sif Oidak area south of Casa Grande.

The Zuni Settlement and GRIC Settlement proposals and the SAWRSA Amendments should continue to be supported by the State as they move through the Congressional approval process. All three settlements will involve statutory changes and financial contributions from the State in the form of appropriations, services or firming obligations.

### **Adjudications Issues**

Progress in the adjudication of surface water rights within Arizona has been slow in recent years due to setbacks in the legal process. Recently, the adjudications in both the Gila River and Little Colorado River (LCR) watersheds have moved forward, and the Adjudication Courts have begun to request more assistance from ADWR regarding claims waiting to be adjudicated. As a general matter, the court is adjudicating Indian and federal non-Indian claims first, then intends to move to individual claims of which there are just under 29,000 in the Gila and Little Colorado Rivers combined. The adjudication is probably decades away from being completed. Now that adjudications activities are moving at a faster pace, there could be very substantial impacts on ADWR. The adjudications support section, formerly up to 50 people, was eliminated in the mid-1990's, leaving one hydrologist, one attorney, and one administrative assistant in the Office of Legal Services to support the program. Additional resources within ADWR are accessed on an as-needed basis.

Major claims yet to be addressed by the court involve the Hopi and Navajo lands in the Little Colorado River adjudication. In the next couple of years, the court has indicated that it would like ADWR to begin work on a Hydrographic Survey Report for the Hopi lands. This will be a major work effort.

### **Surface Water Issues**

#### *Water Rights Located on Federal and State Land*

In 1995, House Bills 2276 and 2193 were enacted, which in part, attempted to clarify ownership of water rights on state and federal land. In 1999, many of the provisions within these bills were declared unconstitutional, which left unresolved legal issues concerning water uses on federal land. The state land provisions were upheld. As a result, ADWR has not taken any action regarding applications for new water rights or assignments of water rights on federal land since 1999. In addition, ADWR has not taken action on applications filed before 1999 on state lands. The backlog that this has created for the Water Management Support Unit will require additional staff once the approval is given to process these applications.

#### *Flood Control Structures*

Due to the availability of federal funds, many entities throughout the state want to construct flood control structures. Water cannot be stored without being put to beneficial use and flood control is not a beneficial use by statute. This has caused a lot of controversy and has made it necessary to increase our efforts to educate the public and other agencies about surface water.

### **Rural Watershed Initiative**

The future of funding for the Rural Watershed Initiative is unknown at this time. Without completing hydrologic studies in rural Arizona, most of rural Arizona will have inadequate planning information regarding the state of the groundwater system within the watersheds.



Increasing populations in rural Arizona necessitate the development of water management and conservation plans to ensure adequate water supplies for the future of the rural communities and towns. The Rural Watershed Initiative was the primary source of funding for technical studies in rural Arizona. Discontinuation of funding for the Rural Watershed Initiative will also result in the loss of matching funds from other sources.

Funding for the Rural Watershed Initiative and for planning and hydrologic support within ADWR should be expanded.

### **Border Water Issues**

There are serious long-term water supply availability issues in the U.S.- Mexico border region that are receiving increasing attention as conditions become more critical. Water using activities and population growth in Mexico affect Arizona's water resources and water management efforts. Coordination with water users and other agencies in the border region regarding water conservation opportunities and water supply planning for drought and growth is necessary. The IBWC has indicated an interest in working on a bi-national groundwater management treaty.

ADWR should continue to work with federal agencies and others with resource programs along the border including the IBWC, North American Development Bank (NADBank), Border Environment Cooperation Commission (BECC), and the Environmental Protection Agency (EPA) to represent Arizona's water resource interests in the border region. Where appropriate, ADWR will provide input on program development, such as EPA's Border 2012 project, cooperate on border water resource studies and identify opportunities for collaboration and funding. Enhanced planning and collaborative efforts can result in more secure long-term water supplies for border communities and increased knowledge of regional resources.

### **Power Plant Line Siting Issues**

Development of new power plants in Arizona may have a significant impact on future water supply availability, both in rural communities and within AMAs. Although dry cooling methods exist, Arizona does not require the use of this technology. Under A.R.S. §40-360.01 (B)(3), the director of water resources or the director's designee is a mandatory member of the Power Plant and Transmission Line Siting Committee. This Committee considers applications for new power plants and corridors for transmission lines, and balances the need for new power sources and reliability against environmental factors. A Certificate of Environmental Compatibility is a permit to construct issued by the Corporation Commission upon recommendation of this Committee. ADWR is asked to review the water source and reliability for a proposed power plant, and to assess its impact on water resources in the surrounding area, including groundwater depletion, and land subsidence. Currently, the Director's designee is a member of ADWR's Office of Legal Services, who coordinates ADWR review of plant applications, and participates in Committee hearings.

### **Cooperative Efforts**

ADWR works in cooperation with multiple agencies, jurisdictions and water users to address water issues within the state. Efforts to increase coordination with federal agencies include working with the Southwest Strategy, a federally-initiated effort to increase effectiveness and coordination. The state needs to continue to actively monitor external policy influences such as ESA changes and implications.

## **KEY 2003 LEGISLATIVE PROPOSALS**

Several water issues may be addressed in the upcoming legislative session. ADWR may bring forward two legislative proposals. Other water interests have also raised issues that they believe should be addressed.

### ***Possible Agency Issues***

**Omnibus Bill.** Several issues are under consideration for inclusion in the annual Omnibus Bill, but no definitive proposals have been finalized. The Omnibus Bill is generated through a consensus process with the water community. The Omnibus Bill has always been used for items that are considered technical corrections and for relatively minor changes that are not controversial.

**Zuni Settlement.** If the federal government acts on the Zuni Settlement Agreement, then legislation at the State level will be required to implement certain conditions of the Agreement. A.R.S. Section 45-172 limits the ability to sever and transfer surface water rights for certain purposes (which include, “wildlife purposes, including fish”) to the State and to political subdivisions. To implement provisions related to this issue, the state statute would have to be amended to allow an Indian Tribe to also sever and transfer surface water rights for “wildlife purposes, including fish.” A draft of this legislation is in process.

#### *Possible Future Legislative Items*

**Governor’s Water Management Commission (Commission) Legislation.** There has been interest in bringing back at least some of the legislation recommended by the Commission. The recommendations related to the Central Arizona Groundwater Replenishment District have been of particular interest.

Additional water issues are likely to come forward prior to or during the legislative session.

## APPENDIX 1: ARIZONA GROUNDWATER MANAGEMENT CODE

From its inception as a state, Arizona's courts have dealt with surface water and groundwater separately. Surface water maintained its pre-statehood allocation based on "first in time, first in right," or prior appropriation. Rights to percolating water, or groundwater, were governed by the common law rule that such water belongs to the overlying landowner. The Arizona Groundwater Management Code (Code) was adopted in response to threats to the water supplies of two of the state's major economic factions, mining and municipalities; an ongoing threat by the federal government to halt the long awaited Central Arizona Project (CAP); and in recognition of severe overdraft conditions in several parts of the state.

The Code, passed in 1980, has three primary goals. The first is to control the severe overdraft occurring in many parts of the state. The second is to provide a means to allocate the state's limited groundwater resources to most effectively meet the changing needs of the state. The third goal is to offset Arizona's use of groundwater through renewable water supply development. To accomplish these goals, the Code set up a comprehensive management framework and established ADWR to administer the Code provisions on three levels: statewide provisions, Irrigation Non-Expansion Areas (INAs), and Active Management Areas (AMAs). The AMAs have the highest degree of groundwater restrictions, focusing on conservation and management goals, while the INAs are prohibited from new irrigated acreage.

### **Statewide Provisions**

Statewide regulatory programs and requirements managed by ADWR include well drilling, construction, licensing, registration and abandonment, groundwater transportation restrictions, and adequate water supply requirements. ADWR conducts testing for well drilling licenses and issues authorizations to drill for any well drilling and construction that occurs in the state. ADWR enforces groundwater transportation restrictions throughout the state and maintains the provisions of the Water Adequacy Program outside of AMAs.

### **Irrigation NonExpansion Areas**

Three Irrigation Non-Expansion Areas (INAs) were established in rural farming areas where the groundwater overdraft was less severe than in AMAs. The Douglas INA and the Joseph City INA were established as the initial INAs. The Harquahala INA was designated in 1982. The management objective in INAs is the prevention of further declines of groundwater supplies primarily through prohibition of irrigation acreage expansion. Any land not irrigated during the years 1975 through 1979 in the Douglas and Joseph City INAs and during the years 1976 through 1980 in the Harquahala INA cannot now be irrigated. Specific water conservation measures are not required within an INA, although it is hoped that all water users within INAs will conserve water where possible. ADWR generally does not regulate the quantity of water used within INAs, although water users are required to file for underground storage and recovery permits, to file notice of intent to drill wells, and to obtain notices of irrigation authority to irrigate eligible lands. Also, owners of nonexempt wells must use approved measuring devices and submit annual groundwater pumping reports.

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**Active Management Areas**

The magnitude of the overdraft in certain areas of the state led to four initial AMAs being designated by the Code. The Prescott, Phoenix, Pinal and Tucson AMAs, roughly the central region of the state, include 80 percent of Arizona's population and account for 70 percent of the groundwater overdraft. In 1994, a southern portion of the Tucson AMA was separately designated as the Santa Cruz AMA. A regional ADWR office, with an AMA director, was established for each AMA. The AMA maps are found in Appendix 3 page 47.

The Phoenix, Prescott and Tucson AMAs are directed to achieve safe-yield by 2025. Safe-yield is defined as a long-term balance between the amount of groundwater withdrawn in an AMA and the amount of water naturally recharged to the aquifer, through either rainfall or runoff percolating into the aquifer, or artificially through recharge projects. The management goal of the Pinal AMA calls for allowing the area's predominantly agricultural economy to continue for as long as feasible, while also allowing for the development of non-irrigation uses by the municipal and industrial water use sectors. The management goal of the Santa Cruz AMA is to maintain a safe-yield condition and prevent local water tables from experiencing long-term declines (A.R.S. §45-562).

The Code directs ADWR to develop and implement water conservation requirements for the agricultural, municipal and industrial water use sectors in five consecutive management periods. These requirements are published in Management Plans for each AMA (A.R.S. §45-564 to 45-568). These documents are required by the Code and are based on Code criteria. The Code generally requires that each consecutive management plan contain more rigorous water conservation and management requirements. Background information and data concerning water use patterns are also contained in the Management Plans. The Management Plans provide the framework for the day-to-day implementation of Code mandates and ADWR policies for each AMA.

Information from annual water use reports is used to estimate the volume of groundwater withdrawals, water stored, and water recovered in an AMA. Water budgets are constructed from these data to illustrate the total supply and demand for a given year.

Current groundwater withdrawal authorities established in the Code, such as Irrigation Grandfathered Rights, Type 1 and Type 2 Non-Irrigation Grandfathered Rights, withdrawal permits, and service area rights, plus groundwater allocations under the Assured Water Supply (AWS) Rules, play a major role in groundwater overdraft. To address this problem, water management efforts focus on ways to encourage water users to convert to renewable supplies. In the AMAs, these efforts include the Underground Storage and Recovery Programs and renewable supply utilization requirements under the AWS Rules.

## APPENDIX 2: CALENDAR OF KEY STATUTORY DEADLINES

1. ADWR's Annual Report – A.R.S. § 45-111 requires the director to submit a report of the ADWR's operations under Title 45 to the legislature and governor on or before July of each year.
2. Water Conservation Report – A.R.S. § 45-563.01 requires the director to issue a report once every three years containing the per capita water use of every municipal provider in an AMA and a description and evaluation of the efforts of each provider regulated under the Non-Per Capita Conservation Program to promote water conservation.
3. WQARF Annual Report – A.R.S. § 45-618(E) requires that by December 31 of each year, the director shall submit an annual report to the legislature and the advisory board established by A.R.S. § 49-289.04 describing the activities of ADWR for the preceding fiscal year relating to expenditures from the WQARF fund.
4. Dam Repair Fund Annual Report – A.R.S. § 45-1212.01(C) requires the director to annually report to the legislature, no later than fifteen days after the commencement of each regular session, on the status of the dam repair fund and the purposes for which monies were expended during the preceding calendar year.
5. Flood Control Assistance Annual Report – A.R.S. § 45-1449 requires that within fifteen days after the commencement of each regular session, the director shall report to the legislature on the disbursement or refusal to disburse money appropriated to the director by the legislature for flood control purposes.
6. Report on Compliance with Time Frame Requirements – A.R.S. § 41-1078 requires that by September 1 of each year, each agency shall report to the Governor's Regulatory Review Council the agency's compliance level with its overall time frames for the prior fiscal year, including the dollar amount of all fees returned to applicants and all penalties paid to the state general fund due to the agency's failure to comply with the applicable time frames. A copy of ADWR's rule setting forth time frame deadlines for processing applications for 77 permits and licenses (A.A.C. R12-15-401) is attached as Appendix 5.
7. Annual and Five-Year Rules Report to GRCC – A.R.S. § 41-1021.02 requires that by December 1 of each year, each agency shall prepare and make available to the public a regulatory agenda for the following year, including a review of existing rules and a notice of any proposed rule making. A.R.S. § 41-1056 requires that once every five years, each agency shall review all of its rules to determine whether any rule should be amended or repealed. The agency must then prepare and obtain the Governor's Regulatory Review Council's approval of a written report summarizing its findings and proposed course of action, including an analysis of the effectiveness of each rule.
8. Buckeye Waterlogged Area Report – A.R.S. § 45-411.01(F) requires the director to submit a report to the governor and legislature no later than December 15, 2015 regarding extending the exemptions from conservation requirements for the Buckeye waterlogged area.

### Other Agency Deadlines

1. Modification of Third Management Plans – The director is required by A.R.S. § 45-566.02(F) to modify the Third Management Plans to include a best management practices program for agricultural groundwater users as an alternative to irrigation water duties. ADWR intends to begin the formal modification process in late November and complete the process in mid-2003. Minor modifications to the municipal and industrial conservation requirements will also be included in the modification package.
2. Fourth and Fifth Management Plans – DWR must promulgate the proposed Fourth Management Plans by January 1, 2008 and the proposed Fifth Management Plans by January 1, 2019. A.R.S. §§ 45-567 and 45-568. After the proposed management plans are promulgated, ADWR must hold hearings on the plans and ultimately adopt final plans.

3. Review of CAGRD's Plan of Operation – The Central Arizona Groundwater Replenishment District is required by A.R.S. § 45-576.02(C) to submit a plan of operation to the director every ten years. The next report is due on January 1, 2004. Within sixty days after receiving the District's plan of operation, the director must determine whether the plan is complete. A.R.S. § 45-576.03(I). On determining that the plan is complete, the director must publish notice of a public hearing on the plan. A.R.S. § 45-576.03(J). Within 120 days after the hearing, the director must issue a decision for each AMA determining whether the plan is consistent with achieving the AMA's management goal. A.R.S. § 45-576.03(M).
4. Setting Groundwater Withdrawal Fees – A.R.S. § 45-614(A) provides that by October 1 of each year, the director shall set the groundwater withdrawal fee for each AMA for the following calendar year. Within thirty days after setting the fee, the director must give notice of the fee for an AMA to the counties, cities and private water companies located within the AMA, and to all holders of groundwater withdrawal permits in the AMA.

## APPENDIX 3: RESULTS, INDICATORS AND ACCOMPLISHMENTS

**NOTE: Numbers that appear in this section are for Fiscal Year '01-02 (July 1, 2001 to June 30, 2002)**

### DIRECTOR'S OFFICE (3 FTES)

*The Director's Office oversees all ADWR activities, with particular focus on policy, legal, staffing and financial matters.*

#### Office of Legal Services (11 FTEs)

ADWR is supported by in-house counsel primarily due to the conflict that arise because other state agencies have water rights that are subject to ADWR regulation. This section also includes adjudication technical staff and the ADWR Docket Supervisor.

##### *Office of Legal Services activities:*

- Respond to and participate in lawsuits

*The Office of Legal Services is currently involved in eleven lawsuits, including one before the U.S. Supreme Court. See Appendix 4.*

- Prepare for administrative hearings
- Write, review and administer contracts (grants, IGA's, leases, etc.)
- Advise the Director and staff on all ADWR programs (e.g., Underground Water Storage, Assured Water Supply, Water Protection Fund, Colorado River, Groundwater Code and surface water regulation) and statewide and national water issues (e.g. Colorado River negotiations)
- Facilitate and negotiate Indian Settlements
- Draft and adopt administrative rules

*For a list of ADWR rules see Appendix 9*

- Develop and adopt Management Plans
- Prepare Groundwater Code, Rule and Management Plan compliance cases
- Provide technical Support to the Maricopa and Apache County Superior Courts in the Gila and Little Colorado River Adjudications

*For a summary of the Adjudications activities of ADWR, see Appendix 6.*

- Assistance in writing and implementation of policies for all ADWR programs
- Serve as the Director's designee on the State Power Plant and Transmission Line Siting Committee and assist in preparing conditions on Certificates of Environmental Compatibility

##### *Office of Legal Services major accomplishments in the last five years:*

- Successfully represented the Director and ADWR in Center for Biologic Diversity, et. al., v. Smith at the Arizona Court of Appeals (currently on Petition for Review to the Arizona Supreme Court)
- Represented ADWR at proceedings related to the Director's Final Decision and Order for In re the Determination of the Whether the Prescott Active Management Area is No Longer at SafeYield



- Assisted in drafting and adoption of the Third Management Plan for the five AMAs, covering the years 2000 - 2010; the enforceable portions of these plans include seven chapters for each of the five AMAs
- Completed the draft Arizona Water Settlements, containing the largest Indian Water Rights settlement in the US. It includes three sections: 1) the CAP repayment agreement; 2) the GRIC settlement; and 3) amendments to the Southern Arizona Water Rights Settlement Act
- Assisted in completion of the Zuni Water Rights Settlement
- Completed the Technical Assessment of the San Carlos Apache Tribe Settlement Agreement
- Completed the Subflow Technical Report for the San Pedro River Watershed
- Completed the preliminary hydrographic survey report for the Gila River Indian Community
- Completed the Interstate Banking requirements for the Arizona Water Banking Authority
- Completed rules for Dam Safety Procedures and revisions of Assured Water Supply Rules
- Negotiated with regulated community and wrote the draft policies for the Underground Water Storage Program

### **Human Resources Office (3 FTEs)**

The Human Resources Office provides a spectrum of personnel, benefit and training services for ADWR.

#### *Human Resources Office activities:*

- Provide full-service recruitment and staffing functions
- Provide personnel rule advice and implementation
- Administer benefits for employees
- Develop, oversee and implement in-house training program

#### *Human Resources Office major accomplishments in the last five years:*

- Developed statistical information regarding salaries resulting in significant market adjustments for Hydrologists, Water Resources Specialists, Engineers and Attorneys
- Selected as pilot demonstration site for Resumix decentralization, reducing the hiring process from six weeks to one week
- Participated in State Personnel Rule Reform, resulting in significant improvements to rules
- No formal complaints of discrimination in hiring or promotion processes in last five years
- Established ADWR Schoolhouse Training Program with various levels of computer and leadership training, including providing college credit for some courses

### **Office of Administration (15 FTEs)**

#### *Office of Administration activities:*

- Procure goods and services
- Draft and administer contracts



- Manage facilities, maintenance and security
- Dispatch motor pool and schedule preventative maintenance
- Provide shipping and receiving services
- Provide mail and courier services
- Process and distribute payroll
- Develop and track budgets
- Provide accounting services, including financial reporting (both internal and external, such as Federal grant reporting and annual reports), as well as special reports for executive and legislative requests
- Process and pay all claims for goods, services, contracts, employee travel and other necessary expenditures

These services are also provided under an Interagency Service Agreement to Arizona Government University, a program within the State's Department of Administration, which is currently housed with the Agency.

*Office of Administration major accomplishments in the last five years:*

- Resolved outstanding 1991 EPA audit that requested repayment of \$400,000 in federal funds. Used forensic and reconstructive accounting to satisfy EPA and resulted in a payment from them to ADWR of an additional \$2,000, instead of any repayment to the federal government.
- Purchase Requisition / Purchase Order / Claim Form integration – Developed a single form to replace three forms in use. This eliminated duplication of effort and reduced time needed to complete transactions, as well as reduced costs resulting from fewer paper forms to purchase, process and file.
- Designed and implemented PO tracking system to allow agency personnel to track status online for combined Purchase Requisitions/Purchase Orders through to the receipt of goods. This allows program personnel who ordered goods and services to check the status of their orders.
- Replaced unreconcilable legacy mainframe system for management reports / budget reports / ad hoc reports – all now agree to AFIS (Statewide accounting system).
- Internal Controls improvements and implementation of recommendations from prior Auditor General reports. We have received clean reports for the past five years.
- Procurement – three week turnaround reduced to three day average turnaround.
- Accounts Payable – turnaround reduced to three day average for vendors, one to two days for employee travel claims.

**Office of Information Technology (17.25 FTEs)**

The Office of Information Technology contains three units: Applications Development, Web Development and Network Support.

*Application Development Unit activities:*

- Develop custom business applications that support agency activities
- Provide user training on all new custom applications
- Perform quarterly/yearly operational functions as they pertain to the custom applications such as Annual Reports and other noticing functions

*Application Development Unit major accomplishments in the last 5 years:*

- Converted the Wells55 mainframe application to client/server application
- Converted the RGR mainframe application to client/server application
- Created the ADWR Purchase Order client/server application
- Generated the Annual Reports and other quarterly AMA noticing.
- Created the Transducer client/server application.

*Web Development Unit activities:*

- Develop and maintain website for ADWR, as well as for groups directly related to ADWR
- Respond to users with web-related issues, improve use of technology

*Web Development Unit major accomplishments in the last five years:*

- Assumed design and content creation responsibilities of website from previous developers
- Created an intranet to serve in-house users
- Added functionality with inclusion of DocuShare section, enabling staff to exchange and post documents relevant to their sections
- Created online electronic commerce section – Water Resources Information Central – to offer maps, reports CD ROMs and other items for sale to the water industry and general public
- Completed redesign of website and initiated web section for amalgamated Water Management Division

*Network Support / Customer Support Unit activities:*

- Provide technical support for the ADWR's computer, network and telecommunications systems hardware and software
- Provide end user support on PC systems hardware and software
- Provide network security for ADWR
- Log all Customer Support calls

*Network Support / Customer Support major accomplishments in the last five years:*

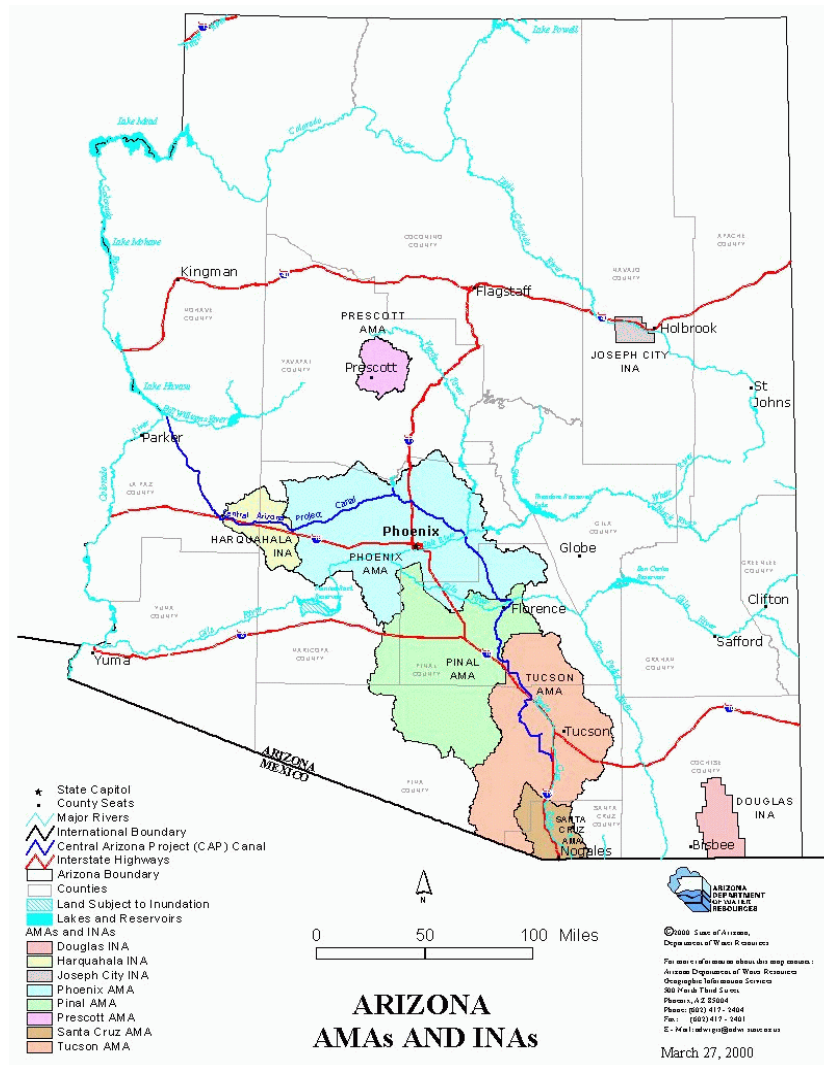
- Completed upgrade to Oracle DBMS from IBM mainframe
- Prepared all agency computer hardware, software and telecommunications equipment for Y2K compliance
- Upgraded Phoenix office back plane from 10 MB to 100 MB
- Met ADWR's schedule of upgrading 1/3 of workstations each year
- Coordinated with ADOA Telecommunications to upgrade all agency remote sites to T1 data communication

## WATER MANAGEMENT DIVISION (61.5 FTES)

This Division manages all surface and groundwater rights in the state, with a special focus on groundwater management within the five Active Management Areas (AMAs).

### Active Management Areas (36.5 FTES)

Offices in each of the AMAs allow for a high level of customer service, and ability to respond to local issues and conditions in each area. Staff are responsible for administration of the area's water rights, permits and regulatory programs, and serve as the main point of contact for members of the public and the regulated community. The AMA staff develop and enforce mandatory conservation requirements for each water use sector, process annual water use reports, review and coordinate applications for underground storage and recovery and assured water supply. AMAs also develop water use information and projections, and water management policy and planning alternatives; coordinate their activities with other sections of ADWR and local jurisdictions; and manage grant programs for conservation and augmentation assistance and monitoring. AMA staff provide policy advice to local jurisdictions on an as-needed basis. In addition, the Phoenix and Tucson AMAs administer water rights in the Douglas, Harquahala and Joseph City Irrigation Non-Expansion Areas. A summary description of each AMA and a water budget table for the AMAs can be found in Appendix 7 and 8.



Active Management Area performance measures FY 02:

**AMA FISCAL YEAR '02 PERFORMANCE MEASURE SUMMARY**

		PHOENIX	TUCSON	PINAL	PRESCOTT	SANTA CRUZ
1.	Public Assistance					
	Inquiries addressed	7840	3900	2536	4500	1300
2.	Water Right/Permit Administration					
	Groundwater rights and permits administered	8500	1548	1413	172	135
	Conveyances/Modifications processed	12	72	60	30	15
	Annual reports processed	8400	1282	1400	172	135
	Failure to file actions	170	24	50	2	1
	Audited	0	21	12	15	0
3.	Assured Water Supply Program					
	Applications reviewed	52	4	9	1	5
	Designation modifications reviewed	3				
4.	Management Plan Implementation					
	Notices mailed	10	30	60	10	0
	Agricultural flexibility account balances calculated	7300	211	1200	5	61
	Administrative reviews processed	0	0	48	0	2
5.	Outreach Activities					
	Conservation grants/IGAs managed	9	7	4	0	5
	Public events staffed	7	7	6	2	5
	Educational presentations	7	20	14	30	7

Each AMA is involved in regional cooperative activities with other jurisdictions and interest groups. The following chart is illustrative of the types of cooperative efforts currently underway.

### List of Cooperative AMA Efforts

Active Management Area  Cooperative Efforts*	AMA					Primary Emphasis		
	Phoenix	Tucson	Pinal	Prescott	Santa Cruz	Planning	Policy	Outreach
Casa Grande Community Water								
CAWCD 'Project Wheel'								
Central Arizona Salinity Study								
City of Prescott Community Roundtable								
City of Tucson Landscape Advisory Committee								
East Valley Water Forum								
Institutional and Policy Advisory Group								
International Boundary and Water Commission								
Irrigation Management Service								
Landscape Irrigation Standards Working Group								
Non Per Capita Conservation Advisory Group								
Open Space Alliance								
Environmental Policy Advisory Group								
Pinal AMA Goal Development Group								
Pinal County Governmental Alliance								
Pinal County Water Augmentation Authority								
Prescott Creeks Preservation								
Recharge Stakeholder Group								
Santa Cruz AMA Water Rights Settlement Group								
Santa Cruz County Planning and Zoning								
SAWRSA Drafting Committee								
Upper Bill Williams Partnership								
Water Use It Wisely Campaign								
WestCaps Committee								
Yavapai County Water Advisory Committee								

\*Efforts in which AMAs have a direct and ongoing role. In addition to these, AMA staff regularly interact with a large number of additional groups and agencies.

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*Active Management Area major accomplishments in the last five years:*

- Developed a Third Management Plan for each AMA, including updated water budgets and projections, new enforceable conservation requirements for agricultural, municipal and industrial water users, water quality information, and a conservation assistance, augmentation and monitoring program. The management plans are administrative law, and are adopted pursuant to a rigorous public review and adoption process. All of the conservation requirements were negotiated and reviewed by advisory committees established by ADWR and multiple external interest groups. The management plans contain extensive water supply and demand information for the AMAs and are considered a major reference book. The five management plans contain more than 2,000 pages total, and were adopted on December 13, 1999.
- Supported the Governor's Water Management Commission (GWMC). The GWMC was established in May of 2000 to review the Groundwater Code and recommend changes, if necessary, to ensure that the five Active Management Areas within the State continue to maintain a reliable and sustainable water supply to meet current and future water needs. Each AMA established Task Forces to identify the issues facing their areas, review the effectiveness of the Groundwater Code in achieving statutory management goals, and identify potential solutions. The total membership of these Task Forces and associated subcommittees, which met regularly for up to two years, was 126. Their work was forwarded to a Technical Advisory Committee, and finally to the GWMC itself. The GWMC formed multiple subcommittees and workgroups that were also supported by AMA staff. The GWMC recommended Code and policy changes to the Governor in December of 2001, but more importantly, concluded that the "goals and legal framework contained in the Groundwater Code are sound and should continue to guide water management decisions and investments in the five AMAs.
- Initiated enhanced monitoring programs in cooperation with the Hydrology Division to improve the understanding of surface water flows and groundwater conditions within the AMAs, and/or land subsidence monitoring programs using gravimetry or satellite interferometry.
- Initiated regional recharge planning efforts in several AMAs. In the Tucson AMA, for example, the Institutional and Policy Advisory Group evaluated 35 different recharge options from a cost and policy perspective, made recommendations to the Arizona Water Banking Authority regarding its Facilities Inventory, and continues to meet to evaluate regional recharge issues.
- Developed the declaration that the Prescott AMA was in excess of safe-yield, following an in-depth hydrologic investigation.
- Completed major improvements to the data management system for the agency, in cooperation with the Information Technology Office and the Water Management Support Section. They include streamlined procedures for calculating flexibility accounts for agricultural water rights and conveyances of water rights, improvements to the Wells55 database, a shared directory for Oracle Browser queries, improved mapping capabilities, providing data to the public on CD's and providing improved forms through the Internet.
- Developed an alternative agricultural conservation program based on Best Management Practices (BMP) in cooperation with the agricultural community. The BMP program is an alternative conservation program designed to be at least as effective in achieving water conservation as the original allotment-based program. This program is included in the proposed modification to the Third Management Plan.
- Performed outreach and educational activities in support of AMA management goals, including presentations to community groups, water users, schools and others. In addition the AMA staff organized and developed landscape ordinances and conservation events such as low water use landscaping contests. In conjunction with the conservation assistance grant program, the AMAs have developed conservation-related videos, studies, workshops and research projects.



## Recharge Program

This program is supported by staff from each of the AMAs, Hydrology and the Office of Legal Services. The Underground Storage, Savings and Replenishment (Recharge) Program has been in place since 1986. The purpose of the program is to maximize utilization and storage for future use of CAP water, surface water and effluent

### *Recharge Program activities:*

The Underground Storage, Savings and Replenishment (Recharge) Program is critical to the implementation of effective groundwater management programs. Credits generated through this program are used in a variety of ways, including meeting Assured Water Supply requirements for renewable supply use. Recharge activities in Arizona are governed by permits issued by ADWR pursuant to statute. The table below summarizes the permit status; most were issued in the last five years.

Once a permit has been issued, ADWR monitors the performance of the recharge facility to ensure that it continues to meet the statutory criteria and to track the resulting credits. This is done through the evaluation of reports, which are submitted by every permit holder on at least an annual basis. Staff examine each report for accuracy and completeness as well as compliance with permit conditions, which may include water level and water quality limits as well as other requirements.

Recharge credits are then calculated based on water stored and recovered during the year. Credits are tracked internally as well as reported to permit holders. At this time, over three million acre-feet of recharge credits are held by more than 70 different entities.

### **Status of Recharge Permits (as of October, 2002)**

Type of Recharge Permit	Use of Permit	Major Criteria for Issuing Permit	Permits Currently Active	Permits Issued FY 02
Underground Storage Facility (USF) Permit	Allows operation of a direct recharge facility using natural stream channels, infiltration basins, injection wells, trenches, etc.	Storage will not cause unreasonable harm to land and water users  Storage is hydrologically feasible	46	16
Groundwater Savings Facility (GSF) Permit	Allows operation of a facility where a renewable supply is substituted by a water user for groundwater that would otherwise have been pumped.	Replacement of groundwater on a gallon for gallon basis  Renewable supply would not be a reasonable alternative except through the GSF	20	2
Water Storage Permit	Allows storage of an excess renewable supply (e.g. CAP water) at a USF or GSF	Applicant has the legal right to use the source water	149	20
Recovery Well Permit	Allows recovery of stored water through pumping a well.	Pumping will not damage surrounding users  Consistency with the management plan and goal	67	27

**Recharge Program major accomplishments in the last five years:**

- Improved the recharge permit application forms to clarify requirements, in cooperation with users
- Streamlined the process for reviewing facility permits
- Water stored by regulated permittees is nearly 3.4 million acre-feet

<b>Cumulative Water Storage through Calendar Year 2001: (*Some credits not yet issued)</b>			
<b>Phoenix AMA:</b>	<b>Stored (AF)</b>	<b>Recovered (AF)</b>	<b>Credits Issued*</b>
Effluent	143,225	26,996	116,229
CAP	1,838,751	54,175	1,784,576
Other	96,095	81,567	6,922
<b>TUCSON AMA:</b>			
Effluent	55,864	46,423	9,441
CAP	313,353	37,601	275,752
Other	0	0	0
<b>PINAL AMA:</b>			
Effluent	978	165	813
CAP	926,656	2,349	924,307
Other	0	0	0
<b>PRESCOTT AMA:</b>			
Effluent	17,683	2,841	14,842
CAP	0	0	0
Other	1,487	1,487	0
<b>Grand Total:</b>	<b>3,394,092</b>	<b>253,604</b>	<b>3,132,882</b>

NOTE: For those facilities located outside an AMA, totals were combined with the closest AMA

NOTE: A portion of 2001 totals for storage, recovery, and credits issued are estimated.

NOTE: Total AWBA storage is 1,273,480 AF.



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**Office of Assured and Adequate Water Supply (3 FTEs)**

This office processes all of the applications to demonstrate an assured water supply within AMAs, and an adequate water supply outside of AMAs. These demonstrations ensure that consumers purchasing land in new subdivisions are aware of water supply availability outside of AMAs, and that a 100-year supply of (primarily renewable) water of adequate quality and quantity is available for new subdivisions inside AMAs. Despite the economic slowdown, the numbers of applications for Assured and Adequate Water Supply continues to increase (see graphs).

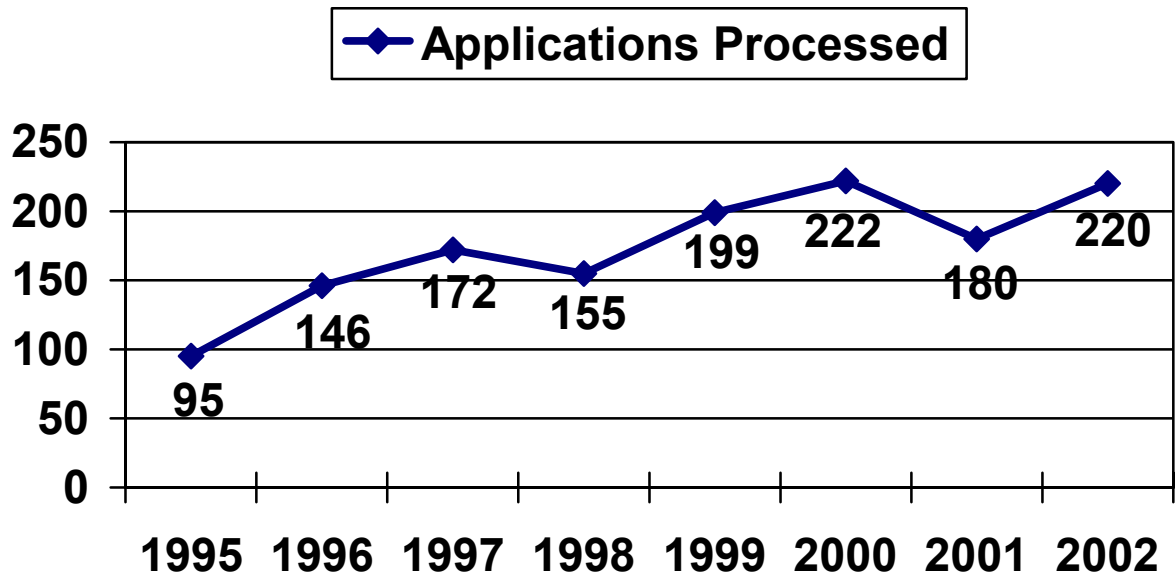
*Office of Assured and Adequate Water Supply performance measures FY 02::*

- Processed 190 Certificates of AWS/Adequacy
- Processed 23 Designations of AWS/Adequacy
- Reviewed 49 applications for membership in CAGRD
- Processed 45 amendments to Certificates/Designations
- Processed 31 exemptions
- Issued 14 reliance letters
- Processed 53 annual reports from Designations

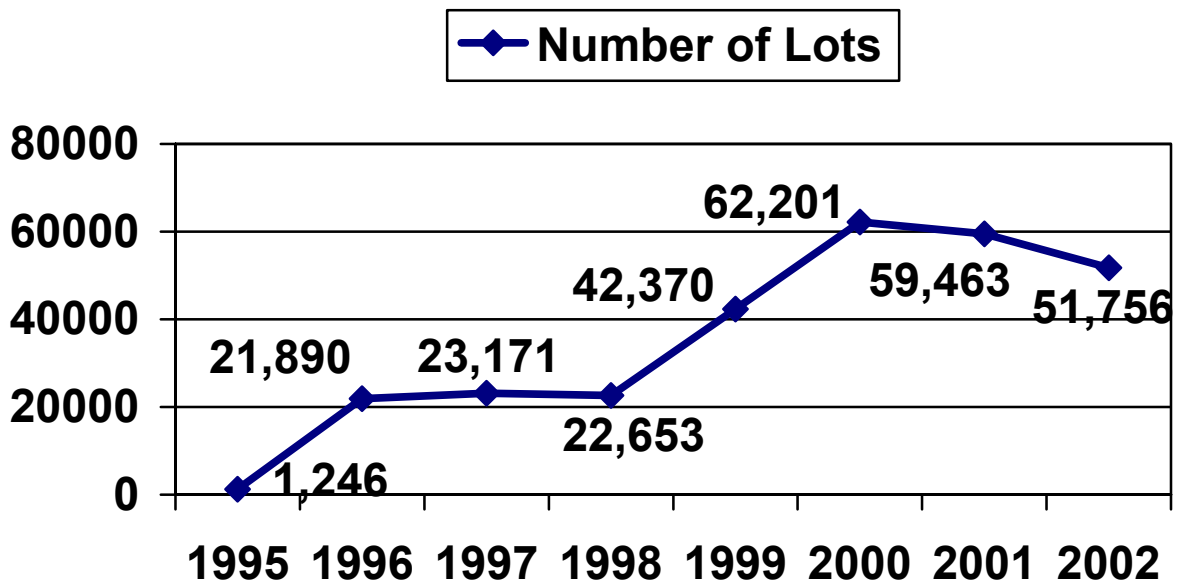
*Office of Assured and Adequate Water Supply major accomplishments in last five years:*

- Established major new program/procedures/tracking systems/ based on rules adopted in 1995
- Processed designation applications from 18 member service areas, including some of the largest water providers in the state
- Processed increasing numbers of applications despite reductions in staff
- Worked with Prescott AMA and Hydrology on Safe-Yield Declaration for Prescott
- Worked with the Office of Legal Services to amend rules limiting the use of Indian leases for AWS
- Conducted a comprehensive review of all Adequacy Designations to ensure continuing adequacy status
- Provided access to status database on the website

## ASSURED/ADEQUATE WATER SUPPLY



## ASSURED/ADEQUATE WATER SUPPLY



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**Water Management Support Section (20 FTEs)**

This section manages surface water rights and certain groundwater rights and permits, maintains water rights records, provides information to the public, and provides imaging and library services.

*Water Management Support Section performance measures and major accomplishments FY 02:*Water Right (Surface Water) Unit performance measures:

- Issued 150 permits, certificates and claims for rights to use surface water
- Amended 662 surface water right records
- Prepared and conducted 8 field investigations
- Reviewed 2,598 Statement of Right of Claims forms

Water Right Unit major accomplishments in last five years:

- Reviewed 43 dams for water rights issues
- Provided water rights forms/applications online

Groundwater Unit performance measures:

- Processed 5,627 Notices of Intent to Drill
- Processed 747 Notices of Intent to Abandon wells
- Processed 1064 requests for variances
- Processed 340 applications to renew or reactivate a well driller's license
- Processed 31 applications for a new well driller's license
- Processed 6 applications for a single well driller's license/exams
- Conducted 65 onsite well inspections
- Participated in 3 administrative hearings
- Located and capped 6 open wells

Groundwater Unit major accomplishments in last five years:

- Increased outreach to county health departments and drilling contractors
- Streamlined procedures for variance requests
- Improved 12 application forms, providing access online
- Streamlining procedures being implemented to maintain Wells55 Database with reduced staffing

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Records Management, Document Imaging, Water Resources Information and Library Units performance measures

- Responded to approximately 2,400 public inquiries
- Responded to over 20,000 public inquiries
- Processed 12,999 fees
- Entered 64,605 surface water records into database
- Entered 239 groundwater records into database
- Available publications, reports, maps for sale:
  - 11 CD ROMs
  - 89 maps
  - 12 books
  - 13 modeling reports
  - 3 hydrologic monitoring reports
  - (\$35,000 Information Central sales annually)
- Participated in 5 Information/outreach events
- Imaged 500,000 records, made them available on website

Records Management, Document Imaging, Water Resources Information and Library Units Major Accomplishments:

- Improved records access has been provided to the public through the internet
- Established Information Central service and ADWR Store
- Streamlined the retention and retrieval of multiple categories of water rights records using barcode labels

## HYDROLOGY DIVISION (55.75 FTES)

The Hydrology Division provides technical hydrologic support to the Water Management, Water Engineering, and Statewide Water Planning Divisions. The Hydrology Division collects and/or evaluates groundwater and surface water information that is used in developing water budgets, hydrologic models, hydrographic survey reports, land subsidence evaluations, Indian settlements, water rights decisions, well drilling application review, water quality assessments, review of recharge applications and ongoing evaluations of recharge facility performance, and a variety of special projects.

### Field Services Section (25 FTEs)

#### *Basic Data Unit performance measures FY 02:*

- Measured 1400 wells in statewide water level index lines
- Monitored 40 water level chart recorders on a quarterly basis
- Installed 15 water level transducers
- Sampled 53 water quality index wells
- Monitored 112 index wells in Prescott AMA
- Sampled 60 wells in Phoenix AMA for Total Dissolved Solids data
- Conducted 2 water level surveys outside of AMAs
- Prepared 4 HMS reports for CD format
- Supported 2 sites through Water Quality Assurance Revolving Fund (WQARF) activities
- Provided 3 Rural Watersheds with hydrologic support (Little Colorado Basin, Upper San Pedro Basin, Verde Valley Basin)
- Measured well discharges on as-needed basis in AMAs

#### *Basic Data Unit major accomplishments in the last five years:*

- Implemented enhanced hydrologic monitoring programs in the Phoenix, Prescott and Santa Cruz AMAs involving installation and data collection from water level transducers, new stream gages, crop type identification, and development of an electronic field database
- Collected the first comprehensive water level measurements in the Lower Colorado Basin (Navajo, Apache and Coconino Counties) in 28 years
- Enhanced the Hydrologic Map Series (HMS) reports to an electronic (CD) format, including a new Aravaipa Basin HMS
- Measured water levels in all five AMAs, and 8 other basins within the state

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***GPS/Gravity Survey Unit performance measures FY 02:***

- Conducted 1000+ GPS surveys at WQARF sites
- Conducted 5 GPS surveys for land subsidence (Glendale/Peoria, Scottsdale Airport, north Scottsdale and Hawk Rock, north Indian Bend Wash)
- Conducted 5 microgravity and GPS surveys (Pinal, Phoenix and Santa Cruz AMAs, along CAP canal and in Upper San Pedro)
- Established 4 absolute gravity stations established in Phoenix AMA
- Provided support for 3 interferogram studies (Phoenix and Tucson AMAs, NASA grant)

***GPS/Gravity Survey Unit major accomplishments in the last five years:***

- Developed a state of the art land subsidence monitoring and aquifer storage change monitoring program using survey quality GPS equipment, gravimeters and satellite interferometry. These abilities have made ADWR a leader in these areas and ADWR staff are actively engaged in cooperative studies with municipalities, Maricopa County, the Central Arizona Project, and federal agencies.

***Geographic Information System (GIS) Unit activities***

- Provide GIS training sessions
- Produce new GIS maps

***Geographic Information System major accomplishments in the last 5 years***

- Developed and taught new classes in GIS, updated the inventory of databases and established a central library and catalog of databases as well as producing them on CDROM for purchase
- Developed GIS/Groundwater model interface
- Developed remote sensing capability for crop surveys

***Surface Water Investigations and Support Unit performance measures FY 02:***

- Conducted 32 field investigations of unregistered and low hazard dams
- Conducted 2 agricultural surveys
- Prepared 5 surface water right application reports
- Responded to 3 field investigations of surface water rights complaints

***Surface Water Investigations and Support Unit major accomplishments in last 5 years***

- Gila River Hydrographic Survey Report
- San Carlos Technical Assessment
- Verde River Basin Hydrology Report

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**Modeling Section (5 FTEs)***Modeling Section performance measures FY 02:*

- Updated or enhanced 3 AMA hydrologic models
- Calibrated and prepared for peer review 1 AMA hydrologic model
- Published 2 Annual Monitoring Reports (Santa Cruz and Prescott)
- Prepared 2 water budgets (Phoenix and Pinal)
- Reviewed groundwater flow models submitted to ADWR for the Assured Water Supply (AWS) Section, the Colorado River Management Section, and two contaminant transport models submitted to the Arizona Department of Environmental Quality
- Reviewed hydrologic reports on the potential effect of power plants on local water resources submitted to the Power Plant and Transmission Line Siting Committee of the Arizona Corporation Commission.

*Modeling Section major accomplishments in the last five years:*

- Developed hydrologic models for the Tucson, Pinal, Prescott and Santa Cruz AMAs, including publishing modeling reports for each.

**Water Resources Section (5 FTEs)***Water Resources Section performance measures FY 02:*

- Reviewed 74 Certificates of Assured Water Supply (AWS)
- Reviewed 80 Water Adequacy statements
- Prepared 8 water availability letters for future certificates
- Reviewed 6 Designations of AWS or Adequacy
- Prepared 6 Analyses of AWS for future certificates or adequacy reports
- Issued 15 water availability reports for unsubdivided lands

*Water Resources Section major accomplishments in the last 5 years*

- Created tracking and information database for all subdivisions and property reviewed by the Water Resources Section.
- Updated Guidelines for Hydrologic Studies for Assured and Adequate Water Supply publication
- Completed hydrologic review of **all** applications submitted to the Hydrology Division within the Licensing Time Frame requirements



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**Surface Water and Recharge Section (5.75 FTEs)***Surface Water and Recharge Section performance measures FY 02:*

- Reviewed 30 underground storage facility application technical and drafted permits
- Reviewed 35 recovery well applications
- Conducted 25 pre-recharge site inspections
- Reviewed 70 quarterly and annual reports
- Conducted 18 recharge rule and application packet meetings
- Prepared 3 technical bulletins for storage facilities
- Reviewed 21 instream flow projects
- Conducted 5 site visits for instream flow projects
- Reviewed 8 hydrologic models
- Conducted 10 appropriability studies
- Reviewed 25 Water Protection Fund grants, site visit deliverables
- Made 6 public presentations at meetings and symposia

*Surface Water and Recharge Section major accomplishments in the last 5 years:*

- Updated and revised hydrologic review components for recharge applications
- Developed database and tracking system for recharge projects
- Drafted instream flow guidelines

**Technical Support Section (10 FTEs)***Technical Support Section performance measures FY 02:*

- Reviewed 650 WQARF NOI's to drill and abandon wells
- Reviewed 1,624 NOI's outside areas of WQARF concern
- Verified in cooperation with DEQ:
  - 3,000 wells as part of comprehensive well inventory program at WQARF sites
  - 15,000 wells in or near WQARF sites
- Evaluated 60 groundwater withdrawal permit applications, including well impact analysis, for water quality implications in WQARF areas
- Evaluated 193 groundwater withdrawal permit applications, including well impact analysis, for water quality implications outside of WQARF areas
- Developed site-specific well construction and abandonment procedures for Pinal Creek
- Evaluated AWS applications for proximity to WQARF and CERCLA sites
- Produced 1 WQARF Advisory Board report
- Inspected 2 sites for vertical cross-contamination
- Prepared 1 groundwater monitoring report for Prescott

*Technical Support Section major accomplishments in the last five years:*

- Developed ADWR-WQARF webpage on water protection issues and areas of water quality concern
- Performed technical analysis for Prescott AMA Safe-Yield Determination
- Conducted pilot conduit well study at Miracle Mile/Silverbell WQARF sites and prepared report
- Conducted field analysis for several statewide water studies, including the Pine-Strawberry Exploration Well Report
- Prepared 6 WQARF site well inventories and 3 reports

**STATEWIDE WATER PLANNING (31.6 FTEs)****Policy Development and Planning Section (3 FTEs)***Policy Development and Planning Section activities*

Ongoing activities within this section include interstate negotiations related to the Colorado River, the Arizona Water Banking Authority, Indian settlements, and other major policy initiatives.

Current activities include:

- Develop water supply and demand information for Arizona communities outside of AMAs
- Prepare special reports such as the ADWR review of the Upper San Pedro Basin for AMA designation
- Support interagency activities
- Provide coordination on border region water issues
- Monitor Endangered Species Act implications for water management
- Represent Arizona's interests in international and interstate water issues
- Support Indian Water Rights settlement activities
- Provide input on statewide water policy development

*Policy Development and Planning Section major accomplishments in the last five years:*

- Represented Arizona interests, along with the Colorado River Management Office, in developing negotiated interstate agreements with California, Nevada and the Secretary of the Interior such as the Interim Surplus Guidelines
- Assisted in the development of interstate water banking rules and other policies for the Arizona Water Banking Authority
- Represented the state in Indian Settlement negotiations

**Water Resources Planning Section (4 FTEs)***Water Resources Planning Section activities:*

ADWR provides planning and technical assistance to rural Arizona where expanding populations, limited groundwater resources, and unique environmental factors are major concerns. This assistance is provided primarily through partnerships with local watershed groups. Staff attend meetings throughout the state to facilitate planning objectives, provide data and hydrologic input, and make presentations about agency activities.

Current activities include supporting 17 watershed partnerships. Each watershed partnership has regular meetings; ADWR has official membership and is expected to attend. For some of the partnerships ADWR has membership on several subcommittees or working groups. The goal is to motivate and assist the watershed partnerships organizationally, technically, and financially in the development of long-range water resources management and conservation plans. Thus far, nine of the watershed partnerships have initiated a water resources management planning process. Those nine are Coconino Plateau, Upper Bill Williams, Upper Gila River, Upper Little Colorado River, Upper Verde, Middle Verde, Northern Gila County, Upper San Pedro, and Silver Creek.

**ADWR Memberships related to the Rural Watershed Initiative\***

1. Upper San Pedro: Staff Working Group, Technical Subcommittee, Administrative subcommittee, and the Partnership Advisory Council.
2. Middle San Pedro: Partnership
3. Lower San Pedro: Partnership
4. Coconino: Coconino Advisory Committee and Technical Subcommittee
5. Eagle Creek: Partnership
6. Upper Gila: Partnership
7. Upper Little Colorado River: Partnership and Technical Subcommittee
8. Upper Little Colorado River MOM: Partnership
9. Upper Bill Williams: Partnership and Technical Subcommittee
10. Upper Hassayampa: Partnership
11. Silver Creek: Partnership and Technical Subcommittee
12. Show Low Creek: Partnership
13. Northwest Alliance: Partnership
14. Upper Agua Fria: Partnership
15. Arizona Strip: Partnership

\*The Upper and Middle Verde are covered by the Yavapai County WAC and Verde Watershed Association, which are listed below.

**External committee memberships with regular meeting commitments**

- Navajo Nation Municipal and Non-municipal Task Forces
- Oak Creek Canyon Task Force
- Population Technical Advisory Committee
- Rural Watershed Alliance
- Mohave County Water Authority
- Yavapai County Water Advisory Council
- Northern Arizona Municipal Water Users Association
- Rural Infrastructure Committee (RIC)
- NAU's Verde Watershed Research and Education Advisory Board
- Verde Watershed and Natural Resources Association)

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*Water Resources Planning Section major accomplishments in the last five years:*

- Implemented the Arizona Rural Watershed Initiative in cooperation with watershed partners
- Worked to establish Legislative funding to support the partnerships, totaled \$2.2 million since 1999
- Encouraged contributions of more than \$1 million in matching funds from other sources
- Initiated a total of 45 projects/studies have been initiated in different watersheds (forty-two of the project/studies are complete. The three remaining studies were 5year studies and are currently on hold until further funding can be identified and obtained)
- Developed and maintain a website for the Arizona Watershed Alliance

**Colorado River Management Office (6 FTEs)**

The Colorado River provides 30% of Arizona's water supplies through mainstream entitlements and Central Arizona Project (CAP) allocations. The river is managed by the Secretary of the Interior, in consultation with all seven basin states. This office provides policy and legal consultation for interstate, intrastate and international activities related to the Colorado River.

*Colorado River Management activities*

- Make recommendations to the Secretary of the Interior regarding allocation and transfer of Colorado River and CAP water
- Project water supplies and use for Colorado River communities, CAWCD, Indian and non-Indian CAP customers, and AWBA
- Consult with Bureau of Reclamation (USBR) regarding annual reservoir and river operations for the delivery of water, and regarding the five year Long-range Operating Criteria for the Colorado River
- Coordinate with USBR, CAWCD and major Arizona Colorado River water users to forecast and manage annual water use within Arizona's 2.8 million acre-foot apportionment
- Develop the Multiple Species Conservation Plan for the Lower Colorado Basin
- Represent the state in Colorado River Basin Salinity Control Forum
- Represent the state on the Glen Canyon Dam Adaptive Management Work Group
- Represent the ADWR on environmental issues related to statewide Endangered Species Act and National Environmental Policy Act issues, such as response to draft recovery plans, comments on Biological Opinions and Environmental Impact Statements

*Colorado River Management major accomplishments in the last five years:*

- Negotiated Interim Surplus Criteria with BOR and reparations agreement with the Metropolitan Water District of Southern California
- Prepared policy paper regarding operation of the Yuma Desalter
- Prepared Colorado River and CAP entitlement transfer policies
- Conducted 35 Colorado River contract consultations
- Administered four CAP Trust Fund Accounts
- Completed reallocation of approximately 65,000 acre-feet of uncontracted CAP M&I water
- Organized Arizona negotiating team for LCR MSCP implementation issues

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**Office of Water Engineering (9 FTEs)**

This office is responsible for the safety of all nonfederal dams in Arizona. The group inspects and evaluates operating dams to determine if safety deficiencies exist and develops actions to remove the deficiencies. In addition, they review applications for proposed new dams, monitor construction of new dams and repairs for existing facilities to reduce the likelihood of catastrophic dam failure and mitigate flood damage through floodplain management. Staff works closely with other state and local entities to provide appropriate flood information through a statewide flood warning system to the National Weather Service and local entities to issue warnings to minimize risk for loss of life and property damage.

***Office of Water Engineering performance measures FY 02:***

- Negotiated grants to secure engineering services for repairs to 5 of the highest priority unsafe ranked dams in Arizona
- Conducted detailed review of 15 applications to construct or repair
- Performed 116 safety inspections
- Worked with 48 owners of unregistered dams to register them
- Added 1 dams to the unsafe dams list

***Office of Water Engineering major accomplishments in the last five years:***

- Completion of a standardized Emergency Action Plan (EAP) for aiding dam owners in development of effective EAP's with minimal resources
- Successfully initiated and implemented a Corps supported dam break and area inundation study for Heber and secured \$30,000 in U.S. Army Corps of Engineers funding
- Reduced safety inspection cost from \$1980 per dam to \$840 per dam
- Identified nearly 160 safety deficiencies at existing dams
- Monitored the construction of 15 dams
- Investigated 400 unregistered dams to determine jurisdictional status
- Assisted in multi-agency construction of Pinto Creek dam for managing flood flows during cleanup of downstream mine tailings spill, avoiding a potential environmental disaster
- Completed a Statewide Flood Warning System and a Flood Warning Information System to reduce loss of life and property and to increase emergency managers' lead time by helping the National Weather Service more accurately predict severe storms and flash flooding by supplying more data in realtime. Program includes management of a relational database and monitoring the operational status of the statewide system
- Completed "Handbook for Arizona Communities on Floodplain Management and the National Flood Insurance Program"
- Completed rule package amending dam safety procedures for the five-year review
- Removed 5 dams from unsafe dams list
- Added 13 dams to the unsafe dams "watch" list
- Reviewed and approved project applications totaling well over \$100 million worth of infrastructure improvements
- Developed a rational ranking system for prioritizing deficiencies at unsafe dams

**Water Quality Unit***Water Quality Unit Activities*

- Support for WQARF Advisory Board
- Participated in negotiations for U.S. Supreme Remedial Action Plans for North Indian Bend Wash and Apache Powder Company
- Participated in Federal Remedial Action Plan preparation for William Air Force Base
- Coordinated with ADEQ concerning WQARF programs including rule making, Payson Remedial Action Program and Estes Landfill Remedial Action Program.

**ARIZONA WATER PROTECTION FUND (SEE SEPARATE REPORT)**

**ARIZONA WATER BANKING AUTHORITY (SEE SEPARATE REPORT)**

## APPENDIX 4: ONGOING ADWR LITIGATION

- a. *Arizona v. California*, United States Supreme Court, No. 8, Original.  
Problem Description: Litigation to determine the entitlement of the Fort Yuma Indian Reservation (Quechan Tribe) to Colorado River water. To the extent that such an entitlement is determined to arise from reservation lands, if any, in Arizona, use of that entitlement will count as a part of the state's annual entitlement to 2.8 million acre feet of Colorado River water, to the detriment of lower priority Arizona water users, including the Central Arizona Project.  
Relevant Facts: In 1953, Arizona invoked the original jurisdiction of the United States Supreme Court to bring action against California to determine Arizona's entitlement to Colorado River water. In 1963, the Court issued its opinion, dividing the waters among the states, but also finding that various Indian tribes along the river held "reserved rights" to river water. The rights of the Quechan Tribe are currently being litigated, with summary judgment motions due to be filed in March, 2003.
  
- b. *Center for Biological Diversity, et al. v. Smith, ADWR, et al.*, Maricopa County Superior Court, No. CV2002000171; Court of Appeals, Division One, Nos. 1 CASA 020168, 1 CASA 020177, and 1 CASA 020178 (consolidated).  
Problem Description: Suit brought by environmental group alleging that Arizona laws administering groundwater pumping inadequately protect public trust interests in surface water flows.  
Relevant Facts: Motion to dismiss brought in superior court was denied; however, special action to court of appeals seeking dismissal was granted. Plaintiff has petitioned for review before the Arizona Supreme Court.
  
- c. *Coalition of Canada del Oro Residents, et al. v. ADWR, et al.*, Maricopa Superior Court, No. CV2002091362.  
Problem Description: Challenge by neighborhood activists to certificate of assured water supply issued by ADWR for a subdivision in the Tucson area. Suit alleges that laws governing the assured water supply program violate the public trust doctrine.  
Relevant Facts: ADWR's actions were upheld before the Office of Administrative Hearings. Case is pending before superior court.
  
- d. *Arizona Water Company v. ADWR*, Maricopa County Superior Court, No. CV90008015 and CV99001840.  
Problem Description: Suit brought by private water company challenging ADWR's conservation program for municipal water providers in the Groundwater Management Plans for the Second Management Period (1990 to 2000).  
Relevant Facts: After program was affirmed before the Office of Administrative Hearings, the superior court found for the plaintiff. ADWR has appealed the decision to the court of appeals.
  
- e. *Arizona Water Company v. ADWR*, Maricopa Superior Court, No. CV2000001700; *Arizona—American Water Company v. ADWR*, Maricopa County Superior Court, No. CV200001497.  
Problem Description: Suits brought by private water companies challenging ADWR's conservation program for municipal water providers in the Groundwater Management Plans for the Third Management Period (2000 to 2010).  
Relevant Facts: Both suits deal with issues being determined in the suit brought by Arizona Water Company for the conservation plan for the Second Management Period. Therefore, both of these suits are on hold pending resolution of that action.



- f. *Rio Rico Properties, Inc. and City of Nogales v. ADWR*, Maricopa County Superior Court, No. CV2002012124.  
Problem Description: Plaintiffs brought \$450,000 action against ADWR seeking refund of groundwater withdrawal fees paid between 1984 through 1994. Suit seeks reimbursement of fees paid, with interest, asserting that water pumped during the relevant time period was surface water, not groundwater, and therefore not subject to the groundwater withdrawal fee.  
Relevant Facts: Action is pending before superior court, but currently stayed by agreement of parties.
- g. *10K, L.L.C. v. ADWR, et al.*, Maricopa County Superior Court, No. CV2001008089; Court of Appeals, Division One, No. 1 CACV 02-0622  
Problem Description: Suit brought by property owner objecting to the issuance of a permit by ADWR to allow an underground storage facility on adjacent land.  
Relevant Facts: Action pending before court of appeals.
- h. *In re the General Adjudication of all Rights to Use Water in the Gila River System and Source*, Maricopa County Superior Court, Nos. W1, W2, W3 and W4; *In re the General Adjudication of all Rights to Use Water in the Little Colorado River System and Source*, Apache County Superior Court, No. 6417.  
Problem Description: The two general stream adjudications ongoing in the state are to resolve the nature, extent and relative priority of water rights to surface water flows located on lands that cover over half of the state, including the Phoenix and Tucson areas and numerous Indian reservations.  
Relevant Facts: ADWR provides assistance to the courts hearing the adjudications on hydrologic and technical issues.
- i. *Defenders of Wildlife v. Bureau of Reclamation*, United States District Court, District of Columbia, Civ. No. 1:00CV01544; United States Court of Appeals for the District of Columbia Circuit, No. 005377.  
Problem Description: Plaintiffs challenge the Bureau's management of the dams of the Colorado River, asserting that the management is violative of the Endangered Species Act. Relief sought by Plaintiffs may jeopardize Arizona's ability to exercise its full right to Colorado River water.  
Relevant Facts: ADWR's motion to intervene was denied and has been appealed to the Court of Appeals. ADWR has filed amicus brief in District Court on merits of case.
- j. *In the Matter of Application for a Permit to Appropriate Public Water of Cherry Creek*, Application No. 33-966009, Office of Administrative Hearings, Docket No. 02A-SW002-DWR.  
Problem Description: In an administrative proceeding, ADWR's legal authority to administer an instream flow program has been challenged. It has been asserted that ADWR does not have authority to issue permits and certificates for instream flow purposes, that the federal government is not entitled to hold an instream flow permit or certificate, that all prior instream flow permits and certificates granted by ADWR are void, and that no further permits or certificates may be issued in the future without additional legislation and rules.  
Relevant Facts: The U.S. Forest Service filed an application for a water right based on wildlife and recreation uses in Cherry Creek. Phelps Dodge protested the application on legal grounds, and the matter is set for hearing in mid-December 2002 in the Office of Administrative Hearings. At the conclusion of the hearing, the administrative law judge will make a recommendation to the Director regarding the legal issues, as well as whether the U.S. Forest Service application should be granted. The Director's decision will be subject to judicial review in Superior Court.
- k. *San Carlos Apache Tribe, et al., v. United States, et al. (Globe Equity Decree)*, United States District Court, District of Arizona, No. CIV 99255 TUC ACM.  
Problem Description: Litigation involving the interpretation of a previous court decree establishing relative rights to surface water on the Gila River.

Relevant Facts: ADWR monitors the case for issues of statewide importance and has participated as *amicus curiae* on some issues.

I. Ongoing proceedings before the Office of Administrative Hearings (OAH)

Problem Description: All ADWR permits are subject to appeal by the applicant and usually by protestants to the issuance of the permit. Hearings on these appeals are mandated by law before OAH. In addition, ADWR pursues civil violations of the Groundwater Code through hearings before OAH.

Relevant Facts: The number of challenges before OAH of ADWR permits has increased from five challenges five years ago to fifteen last year, for a total of 44 cases during that five year period, and there has been a resulting increase in the number of those administrative actions being appealed to superior court. The majority of the recent challenges has occurred in the assured water supply program, where citizens or environmental groups have challenged the issuance of a certificate that allows the construction of a new subdivision, and the underground water storage program, where landowners near proposed underground storage facilities have objected on the basis of concerns for their property. During that same five-year period, ADWR has pursued twelve actions at OAH for civil violations of the groundwater code.

## APPENDIX 5: LICENSING TIMEFRAMES

Table A. Licensing Time-frames

No.	License	Legal Authority	Completeness Review (Days)*	Substantive Review (Days)*	Overall Time-frame (Days)*
1	Filling a body of water with poor quality water	A.R.S. § 45-132 (C)	30	60	90
2	Interim water use in body of water	A.R.S. § 45-133	30	60	90
3	Temporary emergency permit for use of surface water or groundwater in body of water	A.R.S. § 45-134	10	20	30
4	Permit to appropriate water (non-instream flow)	A.R.S. §§ 45-151 and 45-153	30	420	450
5	Permit to appropriate water (instream flow)	A.R.S. §§ 45-151 and 45-153	50	530	580
6	Change in use of water	A.R.S. § 45-156 (B)	30	375	405
7	Exception to limitation on time of completion of construction	A.R.S. § 45-160	5	15	20
8	Primary reservoir permit	A.R.S. § 45-161	30	420	450
9	Secondary reservoir permit	A.R.S. § 45-161	30	420	450
10	Certificate of water right (non-instream flow)	A.R.S. § 45-162	20	100	120
11	Certificate of water right (instream flow)	A.R.S. § 45-162	20	190	210
12	Reissuance of permit or certificate held by the United States or State of Arizona	A.R.S. § 45-164 (C)	10	80	90
13	Severance and transfer	A.R.S. § 45-172 (excluding 172.6)	30	390	420
14	Stockpond certificate	A.R.S. § 45-273	30	190	220
15	Transporting water from this state **	A.R.S. § 45-292	120	300	420
16	Waiver of water conserving plumbing fixture requirement	A.R.S. § 45-315	10	3	13
17	Irrigated acreage in an irrigation non-expansion area	A.R.S. § 45-437	30	90	120
18	Substitution of acres in an irrigation non-expansion area/flood damage	A.R.S. § 45-437.02	30	90	120
19	Substitution of acres in an irrigation non-expansion area/impediments to efficient irrigation	A.R.S. § 45-437.03	30	90	120
20	Reversal of substitution of acres irrigated with Central Arizona Project water	A.R.S. § 45-452 (G)	30	90	120
21	Type 1 non-irrigation grandfathered right associated with irrigation land retired 1965-1980	A.R.S. §§ 45-463, 45-476.01, and 45-476	30	90	120
22	Type 2 non-irrigation grandfathered right	A.R.S. §§ 45-464, 45-476.01, and 45-476	30	90	120
23	Irrigation grandfathered right	A.R.S. §§ 45-465, 45-476.01, and 45-476	30	90	120
24	Substitution of acres in an active management area/flood damaged acres	A.R.S. § 45-465.01	30	90	120
25	Substitution of acres in an active management area/impediments to efficient irrigation	A.R.S. § 45-465.02	30	90	120
26	Type 1 non-irrigation right retired after 6/12/80	A.R.S. § 45-469	30	90	120
27	Restoration of retired irrigation grandfathered right	A.R.S. § 45-469 (O)	30	90	120
	Revised certificate for new or additional points	A.R.S. § 45-471			



28	of withdrawal for a Type 2 right	(C)	45	135	180
29	Conveyance of irrigation grandfathered right for electrical energy generation	A.R.S. § 45-472 (B)(2)	30	90	120
30	Conveyance of irrigation grandfathered right for non-irrigation use within service area	A.R.S. § 45-472 (C)	30	90	120
31	Contract to supply groundwater	A.R.S. § 45-492 (C)	15	90	105
32	Extension of service area to provide disproportionately large amount of water to large user	A.R.S. § 45-493 (A)(2)	15	90	105
33	Addition/exclusion of acres by irrigation district	A.R.S. § 45-494.01(A)	30	90	120
34	Delivery of groundwater from an irrigation district to a general industrial use permit holder	A.R.S. § 45-497 (B)	15	60	75
35	Issuance/renewal/modification of dewatering permit	A.R.S. §§ 45-513 and 45-527	30	70	100
36	Issuance/renewal/modification of mineral extraction and metallurgical processing permit	A.R.S. §§ 45-514 and 45-527	30	70	100
37	Issuance/renewal/modification of general industrial use permit	A.R.S. §§ 45-515, 45-521, 45-522, 45-523, 45-524, and 45-527	30	70	100
38	Issuance/renewal/modification of poor quality groundwater withdrawal permit	A.R.S. §§ 45-516 and 45-527	30	70	100
39	Issuance/renewal/modification of temporary permit for electrical energy generation	A.R.S. §§ 45-517 and 45-527	30	70	100
40	Issuance/extension/modification of temporary dewatering permit	A.R.S. §§ 45-518 and 45-527	30	70	100
41	Emergency temporary dewatering permit	A.R.S. § 45-518 (D)	3	7	10
42	Issuance/renewal/modification of drainage water withdrawal permit	A.R.S. §§ 45-519 and 45-527	30	70	100
43	Issuance/renewal/modification of hydrologic testing permit	A.R.S. §§ 45-519.01, 45-521, 45-522, 45-524, and 45-527	30	30	60
44	Change of location of use	A.R.S. §§ 45-520 (A), 45-521, and 45-527	30	30	60
45	Conveyance of a groundwater withdrawal permit	A.R.S. § 45-520 (B)	30	30	60
46	Transportation of groundwater withdrawn in McMullen Valley Basin to an active management area	A.R.S. § 45-552 (B)	45	105	150
47	Transportation of groundwater withdrawn in Harquahala irrigation non-expansion area to an initial active management area	A.R.S. § 45-554 (B)	45	105	150
48	Transportation of groundwater withdrawn in Big Chino subbasin to an initial active management area	A.R.S. § 45-555 (B)	45	105	150
49	Well spacing requirements for withdrawing groundwater for transportation to an active management area	A.R.S. § 45-559	45	105	150
50	Groundwater replenishment district's preliminary or long-term replenishment plan **	A.R.S. § 45-576.03	As prescribed by A.R.S. § 45-576.03 (A)	As prescribed by A.R.S. § 45-576.03 (B), (C), (D), and (E)	As prescribed by A.R.S. § 45-576.03

51	Conservation district or water district long-term replenishment plan **	A.R.S. §§ 45-576.03, 45-576.02(C), and 45-576.02(E)	As prescribed by A.R.S. § 45-576.03 (I)	As prescribed by A.R.S. § 45-576.03(J), (K), (L), and (M)	As prescribed by A.R.S. § 45-576.03
52	Notice of intent to abandon a well	A.R.S. § 45-594 and A.A.C. R12-15-816	15	15	30
53	Well construction request for variance	A.R.S. §§ 45-594, 45-596(D), and A.A.C. R12-15-820	15	35	50
54	Well driller license	A.R.S. § 45-595 (C)	25	105	130
55	Single well license	A.R.S. § 45-595 (D)	25	105	130
56	Renewal or reactivation of well drilling license	A.R.S. § 45-595 (C) A.A.C. R12-15-806	25	15	40
57	Notice of intent to drill	A.R.S. § 45-596, and A.A.C. R12-15-810	15	0	15
58	Well construction permit	A.R.S. § 45-599	30	60	90
59	Alternative water measuring devices	A.R.S. § 45-604 and A.A.C. R12-15-909	15	60	75
60	Underground storage facility permit	A.R.S. §§ 45-811.01 and 45-871.01	As prescribed by A.R.S. § 45-871.01 (B)	As prescribed by A.R.S. § 45-871.01 (D), (G), and (H)	As prescribed by A.R.S. § 45-871.01
61	Groundwater savings facility permit	A.R.S. §§ 45-812.01 and 45-871.01	As prescribed by A.R.S. § 45-871.01 (B)	As prescribed by A.R.S. § 45-871.01 (D), (G), and (H)	As prescribed by A.R.S. § 45-871.01
62	Storage facility permit renewal/conveyance/modification	A.R.S. §§ 45-814.01 and 45-871.01	As prescribed by A.R.S. § 45-871.01 (B)	As prescribed by A.R.S. § 45-871.01 (D), (G), and (H)	As prescribed by A.R.S. § 45-871.01
63	Water storage permit modification/conveyance	A.R.S. §§ 45-831.01 and 45-871.01	As prescribed by A.R.S. §§ 45-831.01(G) and 45-871.01(B) and (E)	As prescribed by A.R.S. §§ 45-831.01 (G) and 45-871.01(D), (E), (G), and (H)	As prescribed by A.R.S. §§ 45-831.01(G) and 45-871.01
64	Recovery well permit	A.R.S. §§ 45-834.01 and 45-871.01	As prescribed by A.R.S. § 45-871.01 (B)	As prescribed by A.R.S. § 45-871.01 (F), (G), and (H)	As prescribed by A.R.S. § 45-871.01
65	Emergency temporary recovery well permit	A.R.S. § 45-834.01(D)	5	10	15
66	Issuance/renewal/modification of water exchange permit	A.R.S. §§ 45-1041, 45-1042, and 45-1045	As prescribed by A.R.S. § 45-1042 (A)	As prescribed by A.R.S. § 45-1042(B), (C), and (D)	As prescribed by A.R.S. § 45-1042
67	Modification of previously enrolled or permitted water exchange/non-Colorado River	A.R.S. § 45-1041 (B)	60	90	150
68	Construction, enlargement, repair, alteration, or removal of a dam	A.R.S. §§ 45-1203, 45-1206, and 45-1207	120	60	180
69	Weather modification license	A.R.S. § 45-1601	15	60	75
70	Certificate of Assured Water Supply	A.A.C. R12-15-702, A.R.S. §§ 45-576	150	60	210

		and 45-578			
71	Designation or Modification of Designation of Assured Water Supply	A.A.C. R12-15-702 and R12-15-714; A.R.S. § 45-576	150	60	210
72	Analysis of Assured Water Supply/unplatted development plan	A.A.C. R12-15-712, A.R.S. § 45-576 (H)	150	30	180
73	Assured Water Supply for State lands	A.A.C. R12-15-713, A.R.S. § 37-334 (F)	30	60	90
74	Water adequacy report	A.A.C. R12-15-716, A.R.S. § 45-108	60	60	120
75	Designation or Modification of Designation of Adequate Water Supply	A.A.C. R12-15-716, A.A.C. R12-15-725 A.R.S. § 45-108	150	60	210
76	Analysis of water adequacy/unplatted	A.R.S. § 45-108 A.A.C. R12-15-723	60	60	120
77	Adequate Water Supply for State lands	A.R.S. § 45-108 A.A.C. R12-15-724	30	60	90

\* The computation of days is prescribed by subsection (4).

\*\* Hearing is required.



## APPENDIX 6: ADJUDICATIONS

Pursuant to A.R.S. § 256, ADWR provides technical assistance to the court or the special master at their request “in all aspects of the general adjudication with respect to which the director possesses hydrological or other expertise.” A general stream adjudication is a judicial proceeding in which the nature, extent and relative priority of water rights is determined. The Office of Legal Services oversees ADWR’s role in the adjudication, represents ADWR in front of the court and the special master, and assists with the preparation of reports and comments requested by the court and the special master.

There are two general stream adjudications in the state, the Gila River System and Source (Gila adjudication) and the Little Colorado River System and Source (LCR adjudication). The exterior boundaries of these two adjudications include more than half of the state, where most of the Indian reservations and federal land is located. There are nearly 30,000 parties in the Gila adjudication and over 3,000 parties in the LCR adjudication. A party is a person or entity that has filed one or more claims to water rights in the adjudication (statement of claimant or SOC). On behalf of federal nonIndian lands alone, the United States has filed over 15,000 claims.

Pursuant to statute and as requested by the court and the special master, the Office of Legal Services provides technical assistance to both of the adjudications in the following areas:

<b>HSRs</b>	ADWR is required to prepare and publish comprehensive hydrographic survey reports (HSRs) for each of the ten watersheds within the two adjudications. HSRs are multivolume publications that involve intensive data collection and field inspection efforts by the ADWR, including detailed information regarding land ownership, hydrology, and the factual basis for each SOC, and ADWR’s recommendations regarding the water rights attributes for each individual water right claim or use investigated. For each HSR, ADWR prepares a preliminary and a final draft. Generally, at least two years are required to prepare the preliminary HSR, with another year or more to review comments and prepare a final HSR. ADWR must provide notice of the filing of the preliminary HSR to each party within the affected watershed, and notice of the final HSR to each party throughout the affected adjudication area. Technical and legal staff within the Legal Division coordinate and prepare HSRs for the court with assistance from other technical staff within ADWR.
<b>Reports</b>	As requested by the court or the special master, ADWR prepares and publishes technical reports on specific issues or factual matters within the adjudications such as Indian water rights settlements, the Globe Equity 59 decree, <i>de minimis</i> uses, inventory of uses within the Santa Cruz River watershed, the determination of subflow, comments on legal issues, and status reports. Technical and legal staff within the Legal Division coordinate and prepare these reports with other technical staff within ADWR.
<b>Data Bases</b>	ADWR maintains and updates SOC information, including names and addresses of the parties to the adjudication, the location and nature of claims, property records, and the payment of filing fees that are forwarded to either the Maricopa County Court (Gila adjudication), or the Apache County Court (LCR adjudication). The information is updated as new SOC’s are filed, and as existing SOC’s are assigned due to changes in property ownership. These data bases are maintained and updated by staff within the Office of Legal Services.
<b>Summons</b>	As required by A.R.S. § 45-253, ADWR sends summons by certified mail to known potential claimants, and provides additional service by publication. Many SOC’s were filed in response to the summons that were issued at the outset of each adjudication. Additional SOC’s are filed as summons for new uses are issued. Over the last year, Office of Legal Services, with assistance from other staff within ADWR, sent out over 10,000 new use summons in the Gila adjudication, which covered the period between 1991 and 2001. Another 3,000 new use summons will be sent out in the LCR adjudication in the next few months. Thereafter, new use summons will be sent out in both adjudications on an annual basis.



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- Central Information Repository** The Office of Legal Services maintains a Central Information Repository for all data, reports, and other information related to both of the adjudications. This information is available to the public and to the parties. The repository contains thousands of documents.
- Court appearances** Legal counsel within the Office of Legal Services appear in front of the adjudication court to respond to questions regarding reports/comments that ADWR has prepared. Legal counsel also directs testimony by technical staff, and the preparation of court exhibits in hearings before the court.

## APPENDIX 7: DESCRIPTION OF ACTIVE MANAGEMENT AREAS

### Phoenix Active Management Area

Mark Frank, AMA Director

The Phoenix AMA encompasses 5,646 square miles in central Arizona and consists of seven groundwater subbasins (East Salt River Valley, West Salt River Valley, Rainbow Valley, Hassayampa, Lake Pleasant, Carefree, and Fountain Hills). A diverse mix of water uses characterizes the AMA, with a heavy and increasing emphasis on municipal and industrial use. Multiple sources of water (CAP, Salt and Verde River surface water, effluent and groundwater) are available and are being used to varying degrees. Approximately 2.3 million acre feet per year of water is used on average in the Phoenix AMA; 1.4 million acre-feet of renewable water (CAP, Salt and Verde surface water, and effluent) and 900,000 acre feet of groundwater. The Phoenix AMA management goal is safe-yield; it currently is in an overdraft condition in the amount of approximately 251,000 acre feet annually.

AMA staff administered 8,500 groundwater rights and permits in the Phoenix AMA, Harquahala INA and Joseph City INA during calendar year 2001. Approximately 7,300 of these rights are for irrigation use, 650 are Type I and Type II non-irrigation grandfathered rights, 106 are rights held by municipal water providers, and 36 are rights held by irrigation districts. There are also approximately 210 groundwater withdrawal permits in the Phoenix AMA. Administration of these rights comprises annual report preparation and review, random audits, failure to file activities, debit/credit balance determinations, conservation requirement reviews, and general assistance to right holders.

### Pinal Active Management Area

Dennis Kimberlin, AMA Director

The Pinal AMA encompasses approximately 4,000 square miles in south central Arizona and includes five groundwater subbasins. A current estimate of the AMA's population is just over 120,000 people. The AMA contains four incorporated municipalities, with Casa Grande the most populous. In addition, there are four large irrigation districts, together encompassing approximately 247,000 acres of irrigable farmland. Farming is still the largest and most vital industry in the AMA, with cotton and wheat the principal crops. Other important industries include tourism, light manufacturing and food processing. Agriculture in the Pinal AMA contributes more than \$1200 per capita to the local economy, which is five times higher than the statewide average.

The Pinal AMA has a dual goal of maintaining the agricultural economy for as long as feasible while protecting water supplies for future municipal growth. The AMA is actively working on refinements to the goal definition to ensure that renewable supplies are utilized to the maximum extent feasible and to ensure a sustainable supply for municipal and industrial uses. There are 1,413 rights and permits administered within the AMA, of which 1200 are agricultural.

### Prescott Active Management Area

James Holt, AMA Director

The Prescott AMA is in the northern portion of the state and encompasses 485 square miles within central Yavapai County. The physical environment in the AMA varies significantly, with major differences in elevation, climate and precipitation. The Prescott AMA management goal is safe-yield; it is currently in a state of significant groundwater overdraft.

Based on data from the Arizona Department of Economic Security (ADES), nearly 75,000 people resided within the Prescott AMA. Population in the AMA is projected to increase to 148,000 people by 2025. Nearly 80 percent of the AMA's current population resides within the City of Prescott, Towns of Prescott Valley and Chino Valley, and the communities of Dewey and Humboldt. Obviously, a significant percentage of the Prescott AMA population resides in unincorporated areas of Yavapai County as well.

The City of Prescott and Prescott Valley Water District, the two large municipal water providers in the AMA, supply the majority of potable water in the AMA. In 2001, these two providers supplied 11,050 acre-feet of groundwater, or 76 percent of the total municipal groundwater demand. The 17 small water providers in the AMA provided only three percent of the municipal water demand.

### **Santa Cruz Active Management Area**

Alejandro Barcenas, AMA Director

The Santa Cruz AMA encompasses approximately 716 square miles in the Upper Santa Cruz Valley Basin and includes the City of Nogales. It contains a 45-mile reach of the Santa Cruz River from the international border to the Continental gauging station, located a few miles north of the Santa Cruz/Pima County line. The Santa Cruz AMA is in the process of clarifying its water management goal to better address the AMA's unique hydrology, environmental, and geographic characteristics. Currently, the Santa Cruz AMA is assumed to be in safe-yield. However, regional growth, both in Arizona and Sonora, Mexico will increase pressure on local water supplies.

All demand sectors rely on water withdrawn from wells. Effluent from the International Wastewater Treatment Plant, surface water, mountain front recharge, and incidental recharge contribute to the replenishment of the younger alluvial aquifer. Withdrawals from shallow wells are therefore comprised of water originating from several sources. An AMA-wide monitoring system may help to identify specific volumes of renewable supply available for use. However, it is currently difficult to distinguish between groundwater and surface water withdrawn from wells.

The average annual water use for the last two years in the Santa Cruz AMA was approximately 23,476 acre-feet. Municipal water use accounts for approximately 30 percent of total demand; agricultural use, 62 percent; and industrial use, 8 percent.

There are 82 irrigation grandfathered rights; 9 type 1 rights; 36 type 2 rights; and 14 municipal water providers regulated by the AMA 4 of which are large providers: the City of Nogales, Rio Rico Utilities, Arizona American Water Company - Tubac, and Valle Verde Water Company. In addition, the Santa Cruz AMA administers 4 groundwater withdrawal permits, and processed 15 groundwater right conveyances.

### **Tucson Active Management Area**

Cindy Shimokusu, AMA Director

The Tucson AMA encompasses 3,866 square miles in southeast Arizona and encompasses two groundwater sub-basins. The AMA's population is approximately 870,000 people. The AMA contains five incorporated cities and towns: Tucson, South Tucson, Oro Valley, Marana and Sahuarita. The average annual water use between 1998 and 2000 in the Tucson AMA was approximately 324,000 acre-feet, of which 90 percent was groundwater, 7 percent was in-lieu CAP water, and 3 percent was effluent. Municipal water use accounts for approximately 49 percent of total demand; agricultural use, 32 percent; and industrial use, 19 percent.

There are 211 large irrigation rights (generally defined as farms of 10 or more acres); 65 type 1 rights; 349 type 2 rights; 1 irrigation district and 147 municipal water providers regulated by the AMA. In addition, the Tucson AMA administers 52 groundwater withdrawal permits, and 65 recharge-related permits. During 2001, AMA staff processed 52 groundwater right conveyances.

The Tucson AMA staff are responsible for the administration of the area's water rights, permits and regulatory programs, as well as those in the Douglas INA. The AMA is the main point of contact for members of the public and the regulated community in the region.

## APPENDIX 8: AMA WATER BUDGETS

	1998				2025			
PHOENIX	Muni	Ag	Indust	Other	Muni	Ag	Indust	Other
GW	207,112	403,268	78,937	135,679	132,100- 140,500	94,700 – 379,700	133,600	225,700 – 313,600
GW (In-Lieu)	-	106,999	-	-	-	121,300	-	-
CAP	171,081	99,046	2,227	0	452,600	50,500	1,500	139,100
SW	456,831	350,410	9,102	144,089	820,700	21,500	18,400	185,300
Effluent	15,459	63,765	73,374	2,325	233,400	60,000	87,500	9,000
IR	61,055	324,543	8,378	67,067	135,900 – 141,500	66,100 – 232,400	12,500	124,600 – 208,000
Other Inputs	195,021				256,500 - 263,000			
Overdraft	250,693				146,400 – 278,900			
PINAL	Muni	Ag	Indust	Other	Muni	Ag	Indust	Other
GW	18,700	371,351	7,088	44,328	20,833	451,413	11,647	68,852
GW (In-Lieu)	-	77,753	-	-	-	6,510	-	-
CAP	512	266,367	0	87,672	8,587	150,000	50	106,964
SW	534	114,958	0	43,521	588	152,803	0	40,303
Effluent	33	4,530	1,204	5,231	2,928	4,274	1,139	5,231
IR	9,890	199,512	0	39,271	16,453	181,688	0	51,237
Other Inputs	60,989				57,426			
Overdraft	194,154				267,606			
PRESCOTT	Muni	Ag	Indust	Other	Muni	Ag	Indust	Other
GW	11,805	4,489	576		13,574	3,200	300	
SW	0	4,472	0		1,500	900	0	
Effluent	685		0		6,426	0	0	
IR	0	3,822	55		0	1,025	15	
Other Inputs	1,347				3,041			
Overdraft	11,646				12,993			
TUCSON	Muni	Ag	Indust	Other	Muni	Ag	Indust	Other
GW	150,835	70,882	56,844	3,800	63,000 – 67,100	44,200	70,700 – 71,200	
GW (In-Lieu)	-	22,947	-	-	-	10,000	-	
CAP	200	0	0	0	146,400 – 162,100	0	0	
Effluent	9,463	980	700	0	37,700	3,000	4,700	
IR	56,100	18,962	6,905	5	13,026 – 13,818	8,700	7,590 – 7,660	
Other Inputs	63,141				106,000 – 106,800			
Overdraft	160,195				50,400 – 53,300			
SANTA CRUZ	Muni	Ag	Indust	Other	Muni	Ag	Indust	Other
Water (All Sources)	7,036	11,274	1,372	22,200	10,776 – 23,999	10,300	2,400 – 4,713	22,200
IR	0	3,950	70	0	0	3,610	120 - 240	0
SW & GW Inflow – Outflows	48,435				24,951 – 42,558			
Effluent Discharges	16,271				5,800 – 23,532			
Overdraft	(10,573)				(612) – 31,811			

**NOTES:** Originally developed for the Governor's Water Management Commission, 2000. GW = Groundwater, SW = Surface Water, CAP = Central Arizona Project Water, IR = Incidental Recharge, Other Inputs include Cuts to the Aquifer, Canal Recharge (Phoenix), and Net Natural Recharge (Mountain Front Recharge, Stream Channel Recharge, and GW Inflow – Outflows)

## APPENDIX 9: ADWR RULES

### ARIZONA ADMINISTRATIVE CODE

### TITLE 12. NATURAL RESOURCES

#### CHAPTER 15. DEPARTMENT OF WATER RESOURCES

**Article 1. Definitions, fees, procedural rules for hearings**

R12-15-101 thru R12-15-152

**Article 2. Procedural Rules**

R12-15-201 thru R12-15-224

**Article 3. Stockpond and other surface water rules**

R12-15-301 thru R12-15-310

**Article 4. Licensing Time-Frames**

R12-15-401

**Article 5. Reserved****Article 6. Reserved****Article 7. Assured and Adequate Water Supply**

R12-15-701 thru R12-15-725

**Article 8. Well Construction and Licensing of Well Drillers**

R12-15-801 thru R12-15-852

**Article 9. Water Measurement**

R12-15-901 thru R12-15-909

**Article 10. Reporting requirements for annual reports, annual accounts, operating flexibility accounts, and conveyances of groundwater rights**

R12-15-1001 thru R12-15-1015

**Article 11. Inspections and Audits**

R12-15-1101 thru R12-15-1102

**Article 12. Dam Safety Procedures**

R12-15-1201 thru R12-15-1226